

Cuban Field
Notes

Alto Cedro 82,83,84
Alvaro Martinez 46
Anne Somerset House 126
Antilla 84
Arriba 111
Arroyo Blanco 69
Arroyo Hondo 65
Asiento la Jagua 45
Azucar 19, 20, 21
Bahia Honda 87, 116
Baigua 99
Bainoa 57
Banos de San Vicente 49
Baracoa 99
Batabano 124
Bebedero 31
Bibijagua 25
Boqueron Trail 126
Bosque #4 40
Buena Ventura 8
Cabanas 86
Cabo Fransica 26
Caimanera 127
Caleta 99
Camaguey 57,58,59,60,61,62,
63,64,65
Camino Malo 45
Camoa 23
Canada Mts. 26
Candelaria 115,118,121,123
Cangilones 57
Cape San Antonio 95
Caralera 45
Cardenas 53,81
Casa de alto 57
Catalina 39
Cayo del Rey 82,83,84
Cayo Piedra 53
Ceiba Mocha 15,16,17
Central 12,13,70,73
Cerro de Cabras 29
Cienega de Zapata 1,2,3
Cienfuegos 12,14
Coca 23
Cocinas 57,60
Colombo 26
Colombo Beach 25
Colonia del Rio 111
Colonia Puerto Rico 111
Colorado 84
Consolacion del Norte 45
Costanera del Abra 45
Costanera de San Vicente 45,
52

Cubezas 31
Cubitas Mts.,58,59,60,61,62,
63
Cubitas Sierra 56
Cumanayagua 14
Cumberland Dike 126
Cuzco 120,121
Cuzco Beach 126
Dos Hermones 45,90,91
El Abra 45,47
El Abron 108
El Cercado 57
El Circulo Cave 57,62
El Espiro 112
El Huro 116
El Mogote 121
El Mulo 117
El Pan de Matanzas 15
El Rangel 111,112
El Toro 109
El Tumbadero 90
El Yayal 55
El Yucatan Loma 57
El Zajonal 45
Encinar Alto 45,48
Ensenada de Banos 45
Ensenada de Cochinos 1,7,8
Escaleras Pass 57
Esperanza 90
Esquela de las Frias 123
Estancia Pass 84
Estacion de Cuesto 82
Falda 100
Farallones de Cenapu 83,84
Farallones de Nipe 82,84
Finca Dolores 116,119
Finca Merced 117
Finca Montejo 65
Finca de Rodriguez 57
Finca de Sabanilla 82
Fisherman's Point 126
Fomento 130
Frances 26
Frias 118
Ganuga 23
Gibara 69,71
Guajaibon 19,20,21
Guajani 45
Guam 10
Guandao 99
Guanaja Pass 57
Guane 97,104
Guantanamo 125,126
Guaso River 125

Guassa 45
Guines 23
Hacienda Jiqui 1
Havana 11,31,85,100,124
Holguin 55
Hospital Point 126
Hotel Ricardo 31
Hoyo de Manicaragua 75
Isabel Maria 37,102
Island Hill 127
Isle of Pines 24,25,26,27
Jauco 99
Jojo 99
Kilometer #14, 89,124
Kilometer #46-45, 130
La Barranca 100
La Chorrera 45,49
La Cumbre 39,40
La Esperanza Port 45
La Guira 39,41,43
La Industria 57
Laguna de Piedra 45
Laguna de Piedra Mogotes 46
La Jagua Mogotes 51
La Penitencia 45,50
Las Cangilones 56,57,63
Lesca Pass 57,61
Light House Hill 186
La Salud 11
La Silla 70
La Silla de Gibara 70
La Vigia 129
Loma de Anafe 100
Loma de Bonachea 77
Loma de Borje 57,64
Loma de Santa Fe 78
Loma de Tapaste 22
Loma de Ternero 76
Loma Sta. Cruz 57
Lomas del Cuzco 117,119,120
Los Indios 26
Los Paradones 57,59
Los Portales de Camayen 69
Los Potreritos 32
Luis Lazo 31,34,103,104,105
Maisy 99
Marianao 101
Mata 99
Matanzas 11,81
Mendoza 97
Miramar Beach 71
Mr. Koop's House 75
Mogote #2 & #2, 89

John B. Henderson Jr.

Field Notes, collecting
in Cuba.

Polygala paludosa on wet ground along
edge of Cienega.

Anacylus and Aenicolids were taken on dead leaves + pieces of palms lying in Ciénega.

were found dead openly in some very open woods near edge of Sierra.

Further exploration developed two operculat especially the large one about $\frac{1}{2}$ mile from shore, under stones in the heavy forest. These were taken alive. The smaller operculat & an opisthospher were taken alive near the shore under stones, slabs of weathered limestone & particularly in the ^{loose friable} dirt under the stones.

The *Urocoptis* was taken dead (a very few live spec.) under stones & in the

debris & humus along side of paths in woods.

The Thysanophora were taken same station as Crocodylus & generally ^{occur} wherever other ground snails are found.

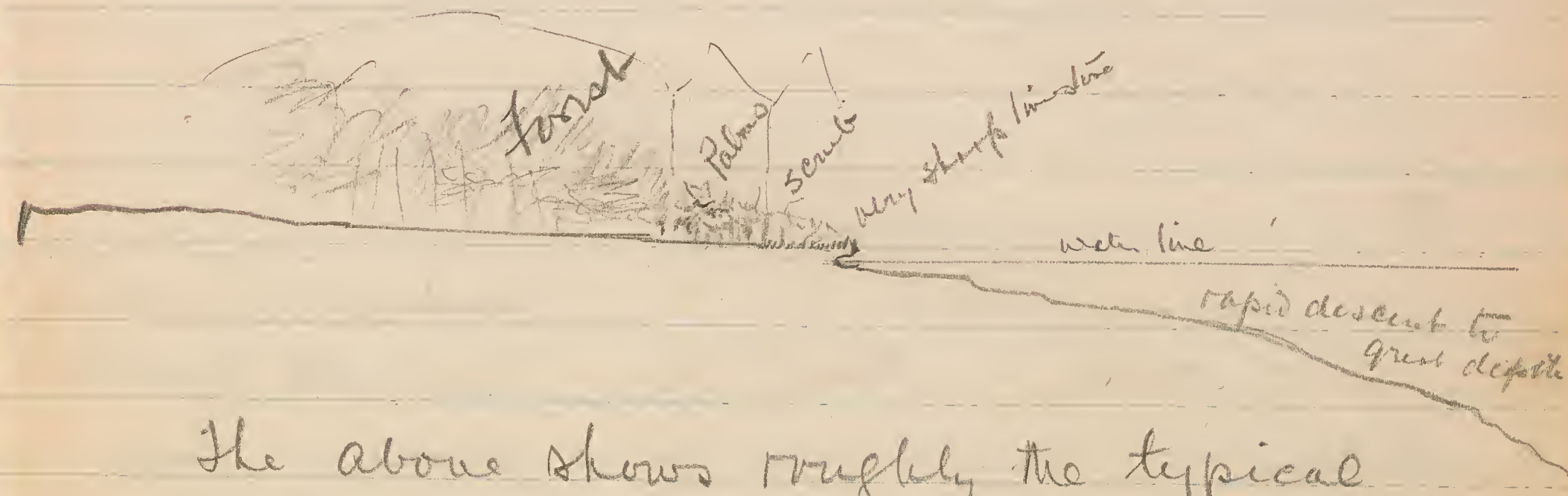
A few fragments of figs found near shore.

A more careful search among the palms (*Thyaca parviflora*) for *Cypripedium* has netted us a very large series varying in size, height of spike, & color. They seem to occur in zones along the shore being far more abundant along 50 or 100 feet of shore line & then practically disappearing for $\frac{1}{4}$ mile or so although the growth of palms continues along apparently the same. The leaves most frequented are those longest dead & most folded. Occasionally, spec. were taken on tree trunks, under bark etc & evidences of them are found in the deep woods when there are no palms at all.

In places along the shore the Anon

were found in great abundance, clinging to stones, tree trunks, leaves, & on the ground.

A visit to the shore across the Bay directly opposite developed as land shells whither. The character of the coast there is very different from here being sandy, shallows. The swamp comes to the beach & vegetation is sparse & scrubby. Such a pest of mosquitoes any very thorough work was impossible.



The above shows roughly the typical elevation and type of tree growth at Rosario.

The wonderful clearness of the water is very striking - probably 60 feet bottom may be seen - corals, sea fans, Neptune cups & white sand.

Above tide on the sharp rock occurs

Several marine mollusks, notably
Verita peloronta + tessellata + versicolor
Sitarina tessellata. Tectarius nodulosa (5)
 is abundant on tree trunks along with
 union. Tectarius muricatus also
 abundant same station as last but not
 so high in trees. Kratina pupa (very
 dark form) in patches on rocks.

Fissurella barbadensis + several
Acmea are fairly abundant about
 high tide mark also the large
Chiton. A number of marine
 species - Columbella, Crithia, Conus etc
 are found sparingly in cavities of rock
 below high tide.

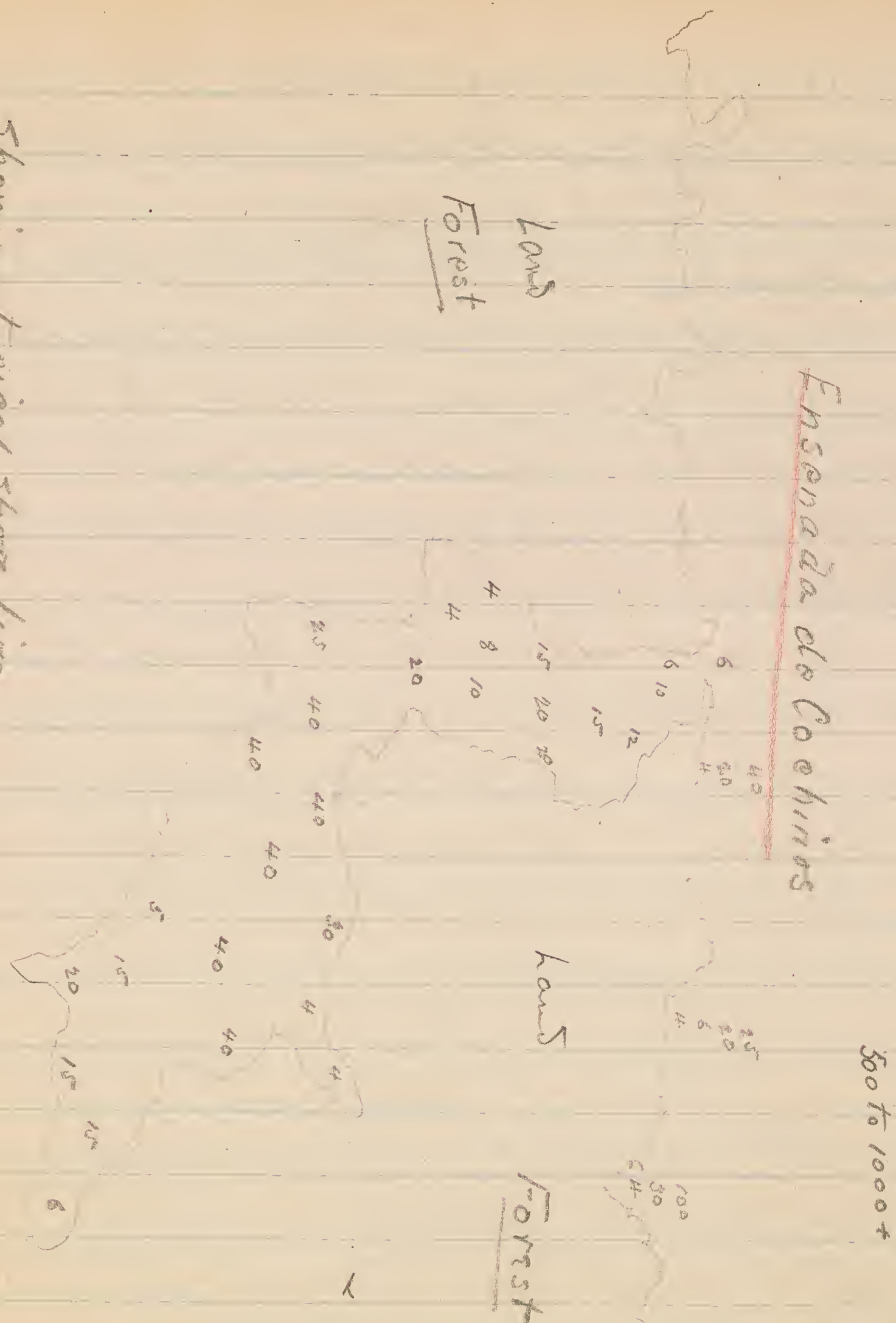
Dredging off this shore is rendered impossible
 by the corals. Many very desirable marine
 species are brought up in a more or less
 broken condition by hermit crabs. Showing
 their probable presence not far off if a
 dredge could only be used.

Tide pools further down the bay showed
 up in some quantity Sivona pica.

Leucogona leucogona, Conus mus.

Purpura patula, Kratina pupa large &

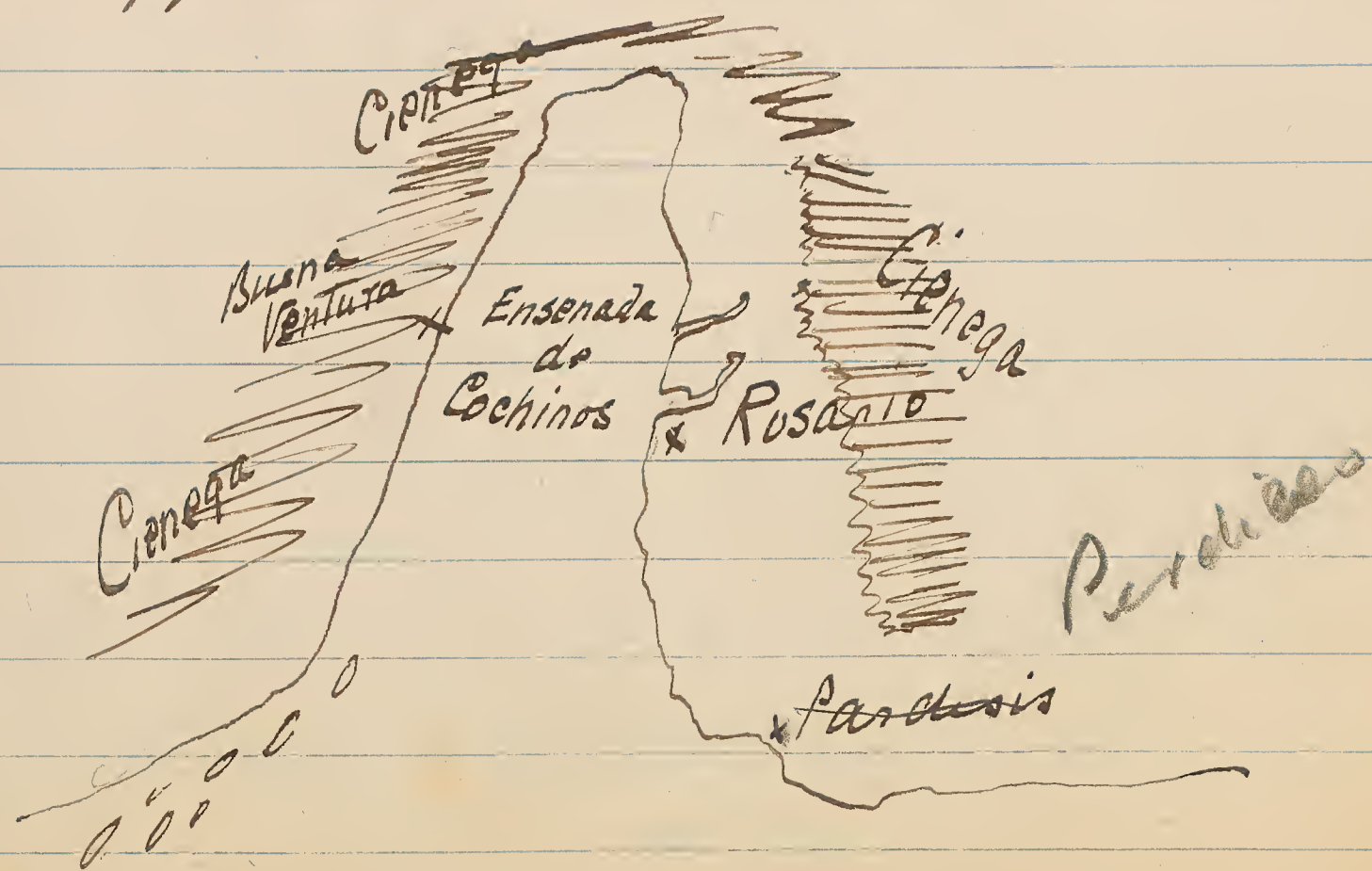
Showing typical shore line
 + a Caleta or river in Rosario
 neighborhood. Depths feet - not from actual example.



The shore line here for 10 to 20 feet is excessively sharp "honey-comb"
 limestone with no soil & hence with frequent pot holes & under ground rivers. Base
 of this is a fringe of small & palms most or less dense & filled with thorny
 shrubs. This is probably 100 feet wide & merges into the forest.

typical in color, Litorina murex, (in great quantities) Mytilus edulis, Columbella murex, - Litorina tessellata.

At Pardises 7 miles S. from Rosario no land shells were found alive except Cerion iostoma. The very few dead shells taken were of the same species as found here. Beginning at about Pardises the shore is more bold, the elevation of 10 to 15 feet, found here only a distance back then comes to the shore, forming a cliff theoretically, but in effect so much eaten into by the sea it presents much the same appearance as here.



List of Rosario species:

Chon. dentatum,

" caudeanum (so called) = caranense P. & H.

" wilsoni (large sp.)

Ch. decuratum, clathratum Jrd. (see Torre notes)

Thysan. boottiana (or vortesi)

Thysan. debilis Mm.

Cepolis cubensis v. pinnicillata

" superata

" multistriata

Pleuro. auricoma

Poly. paludosa

Helicina adpersa

" rugosa

" globulosa

Alcedia minima

Oleacina oleacea, straminea

Urosotis paucana

Sphaerium cubensis

Anulus

Ampullaria erica,

Cerion iostomum

- Vinales - Uro. Vinalensis
Paso Real - " nubila
S. de Guan - " caeruleus
Portales - " discors
Teneria - " incerta (possibly discors - paradoxa)
Guan - Entro. subunguiculata
 " " remota
 " " jugulata
Paso Real - chrysoschasma
Vinales - Entro. regina
 Hel. Sagraiana
Sierra de Guan - Chon. Shuttleworthi
 " Sagebieni
 et. bilabiatum
Cepolis parabolica (Typical)
Helicina jugulata
 " elongata
 " remota
 " Sagraiana
Uro. caeruleus
Megal. mani

Notes from Pilobry's Cuban Shells.

Alcadia nitida, Pfr. - Yimuri Valley.

" rotundata - La Salud, S. of Havana.

2. (Similar to last but more rotund, last
whorl being large & globose)

Alcadia hispida - (Typ. from Trinidad & ^{Cimpego} Cimpego)

A. hispida Var. quadrata Pfr. - Havana & Matanzas.

3. (Quite similar to nitida but a
bit smaller and hispid)

See Bull. Geol. Soc. America - VI, 103.

VII, 67 (1896)

The Havana form of nitida has been called glabra

Soledad Plantation 20 miles S.E. of Cienfuegos.First Visit - Simpson, Wilcox + J. B. H.

Helix auferi (so called)

Pseudobalea perversa.

Cten. immersum (near) Torrellia (Torrellisca) simpsoni H. J.

Thysan. boothiana.

Oleacina orysacea

Thysan. sarcicola (or boothiana),

Uro. variegata

Cten. torquata

"Thysan" debilis Pfr.

Locality - Small loma on side of track from river landing
to Central and about $\frac{3}{4}$ mile from Central.

Soledad Plantation 2nd Visit - Feby 1915.

Simpson, Wilcox + J. B. H.

Locality 1st Same as last visit

2nd Two hills E. of Central about 2 + $\frac{1}{2}$ miles.
(beyond botanical experimental station.)

Cepolis "auferi"

" poeyi

" bouplandi

Pl. Trinitaria

Thysan. suavis

" boothiana

" selenina

Uro. n. sp. (near livida Torre)

Uro. cienfuegosensis Pils

Pseudobalea perversa

Opisthos. torquata Gut.

" simpsoni Torre

"

Oleacina orysacea

" o. straminea Desh.

"

Emoda

Lucidella rugosa Pfr.

Alcacia

Helicina

Richardiella m. cienfuegosensis Pils

Obeliscus homologus Sh. P.
+ var.Chondropoma violaceum Pfr.
var. atkinsi Hen.

Liquis fasc. (dead)

Eutrech. petrosa Pfr.

Megalomas.

Guppya gundlachia

Macrocerin.

Thysan. n. sp. (suavis group)

Cryptalasmus canteroiana (G.) Pfr.

Guppya (n. sp. ?)

Soledad Plantation (E. of Cienfuegos) Sta Clara
Fence on N. side of Caretera just
 before reaching Cumanayagua

Feb'y 1915 - Simpson, Wilcox, J. B. H.

Chondropoma delatreanum (G.) Pfr.

The smoother var. - small - less convex whorls

Eutrochatella petrosa Pfr.

Cryptalusmus canteroiana (G.) Pfr.

Oleacina o. straminea Desh.

Uro. cienfuegosensis Pils

The following are the species we collected at
Cuba Mocha, El Palenque & El Pan de Matanzas
 as determined by Torre. Mocha is 10 miles
 W. of Matanzas & the Palenque & Pan are 6 miles
 N. of Mocha.

Megalomastoma apertum Poey. Mocha, Palen.

Chou. pictum "

" " *V. major* "

" *dentatum* Say " "

" *iradians* Shuttl. "

Ct. rugulosum Pfr. " "

" " *V. nodulatum* Poey " "

Helicina submarginalis Gray " "

" *adspersa* Pfr. " "

" *nitida* Pfr. " "

" *conica* Pfr. " "

Alcadia hispida Pfr. " "

" *minima* Orb. " "

Eutrochatella sloanei Shuttl " "

" *rupestris* El Pan

Helix auricoma Fer " "

" *bouplandi* Lam " "

" *cubensis* Pfr. " "

	<u>Mocha</u>	<u>Palenque</u>
<i>Helix stigmatica</i> Pfr.		
" <i>debilis</i> Pfr.	"	"
" <i>multistriata</i> Desh.	"	"
" <i>torreyi</i> Pfr.	"	"
<i>Liguus fasciatus</i> Mull.	"	"
<i>Macroceramus palenquensis</i> , Gaud.		"
<i>Urocytis scabra</i> Gaud.	"	
" <i>fortis</i> "	"	
" <i>modesta</i> Poey		"
" <i>gracillima</i> Poey	"	
" <i>fumosa</i>	<u>El Pan</u>	"
" <i>rugeli</i> Shuttle (?)	"	"
<i>Glandina oleacea</i> Fer	<u>Mocha</u>	"
" <i>solidula</i> Pfr.	"	"
" <i>subulata</i> Pfr.	"	"

we failed to get on the Palenque Chou.
presaziana, which much resembles
Ch. irradians except in sculpture, but this
 sp. only occurs on the north side of the
 mountain, which Torre & I failed to reach
 after a long & very tiresome ride horseback.

The Pan & Palenque are two mountains
 of about 1000 feet of much weathered
 coral limestone & densely grown over in
 jungle.

The fine *Urocytis gracillima* occurs on an
 old stone fence near the station of Mocha
 (W. 1/8 mile & N. side of track)

Reported from Guajabon & Azuarc (Cross L.)

Guajabon

Azuarc

	<i>Q. oleacea</i>	✓
	" <i>ottonis</i>	✓
✓	" <i>sicilis</i>	
	" <i>incisa</i>	✓
	<i>Strep. cubana</i>	✓
	" <i>sublunulata</i>	✓
	" <i>parviana</i>	✓
	" <i>quarensis</i>	✓
✓	" <i>raugolica</i>	
✓	" <i>sagraiana</i>	
✓	" <i>ruripila</i> (Thyrs)	
✓	<i>Macrocer. latus</i>	
✓	" <i>maculatus</i>	
✓	" <i>elegans</i>	✓
✓	" <i>paivani</i>	
✓	<i>Microc. torquata</i>	
	" <i>irrorata</i>	✓
✓	" <i>crenulata</i>	
✓	" <i>vineta</i>	
	" <i>armata</i>	✓
✓	" <i>soluta</i>	
✓	" <i>presasiana</i>	

GuajabonAzucar

	<i>Urocy. volubilis</i>	
✓	" <i>brunneus</i>	
✓	" <i>blairiana</i>	
	<i>Stenos. gundlachi</i>	✓
✓	<i>Megalomys. procer</i>	
	" <i>mani</i>	✓
✓	<i>Choan. majusculum</i>	
✓	" <i>pretrei</i>	
	" <i>blairi</i>	✓
✓	<i>Chondro. latilabris</i>	
	" <i>segregium</i>	✓
✓	" <i>curculiculata</i>	
✓	" <i>assimile</i>	
	" <i>shuttleworthi</i>	✓
✓	" <i>sericeum</i>	
✓	" <i>excisum</i>	
✓	<i>Entro. regina</i>	
	" <i>subunguiculata</i>	✓
✓	<i>Heimia sagraria</i>	✓
✓	" <i>juvunda</i>	
✓	" <i>elongata</i>	
	" <i>rotunda</i>	✓
	" <i>remota</i>	✓
	" <i>wrighti</i>	✓

Guajabon21
Azucar

✓	<i>Heimia nodae</i>	✓
✓	" <i>fuscata</i>	✓
✓	" <i>rubromaculata</i>	
	<i>Alcedia minima</i>	✓

The above 50 sp. are specially
reported from these two localities by Crosse.

Soma de Tapate -

U. planospira or (S.) aranguana (S.)
 listula juncos
 Chen. pictum

San Jose de las Lajas

U. humboldtiana or ovelliana -
 (= var peroffensis Pils)

At Coca near Guines -

U. humboldtiana - strangulata
 " planospira
 " gracillima
 Eutrochotella rupestris + Stomaria
 Chen. pfefferianum.
 Helix cubensis paucicollata

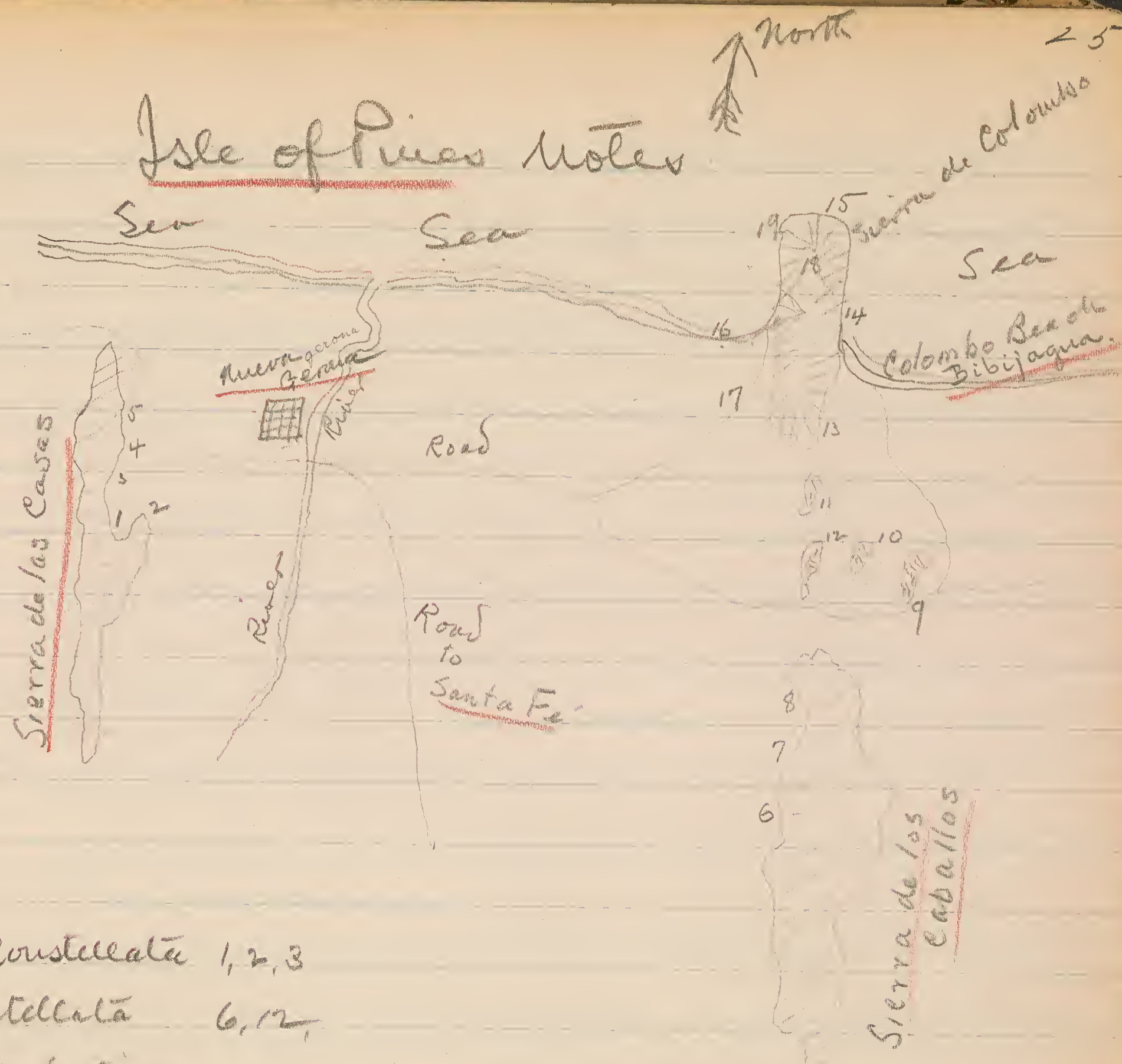
Canoa - on walls. " philippiana, U. aculeata

Ganga -

Chen. pfefferiana (Small Var.)

Isle of Pines Species.

- | | |
|-------------------------------------|-----------------------|
| Megal. procer + Vars ✓ | Cepolis pityoussica ✓ |
| Chon. dissolutum (like pictum) ✓ | Thaiphia boathiana ✓ |
| " Senicarium (S. part of Isl.) ✓ | Cepolis cones ✓ |
| Ct. denegatum ✓ | Pleuro. auricoma ✓ |
| " rugulosum } prob. iden. ✓ | Siguus fasciatus ✓ |
| Tudora pupoides (Caballeros) ✓ | Ancylus radiatulus ✓ |
| " moaeletiana (Casas) ✓ | Planorbis lucidus ✓ |
| Eutricha. Constellata (Casas) ✓ | Simnea cubensis ✓ |
| " stellata (Caballeros) ✓ | Hydrobia |
| " callosa Poy ✓ | Polygona paludosa ✓ |
| " lutescens (both mts) ✓ | Ampullaria ✓ |
| Helicina scopulorum (like sloani) ✓ | |
| " elongata ✓ | |
| " adspersa (both mts.) ✓ | |
| Uro. pruinosa (both mts) ✓ | |
| Pineria teretra ✓ | |
| " beathiana ✓ | |
| Oleacina follicularis ✓ | |
| " oleacea straminea ✓ | |
| " solidula ✓ | |
| " subulata ✓ | |
| Sten. stricta ✓ | |
| Glandinella pomyana ✓ | |
| Lerion pinaria Dale ✓ | |
| Prosopina globulosa ✓ | |

Isle of Pines Notes

Eu. Constellata 1, 2, 3

" stellata 6, 12

Pineria beathiana 14, 15

" teretra 15 (only)

Chon. dissolutum - 19 -

Tudora pupoides 6, 7, 8, 9, 10, 12

Megal. procer 11 & 18 are especially good

Fresh water things + Polygona in old corduroy road, 17

Ampullaria teres - 16 - just back of beach

(over)

Cerion pueria probably on S. coast + at Cabo Francisco in West. also Chon. semicanum.

Up river from Nueva Gerona about 5 miles are said to be rapids, stones, falls etc. probably good for f.w.

Eu. constellata in dry weather live in deep crevices of rock + not easily seen - live in colonies - Best loc. is No. 1 on map.

Eu. stultia same but less abundant - on Cubanos + that system only - not on Casas.

In conglomerate on Colombo Mt. Eu. constellata was observed!

To be visited from Los Indios the Cañada Mts + San Jose. also Western Cape (France) for Cerion + Morlet's Chon. semicanum (probably) Laguna Mt. near Santa Fe is ancient rock + presumably poor collecting. None of these locs. have been explored.

Torre visited Cañada Mts in 1913 + reports nothing there. Morlet's Ch. semicanum is a spurious species

Notes on live animals. 1. of P.

Tudora pupoides

Foot very short - Tentacles all white
Animal crawls sideways as to longitude of shell + progresses by lifting shell over every foot length of progress



Chon. dissolution - white tentacles, foot short.
drags shell just in opposite way from last

Eu. scopulorum has the long vibrating tentacles like Eu. constellata.

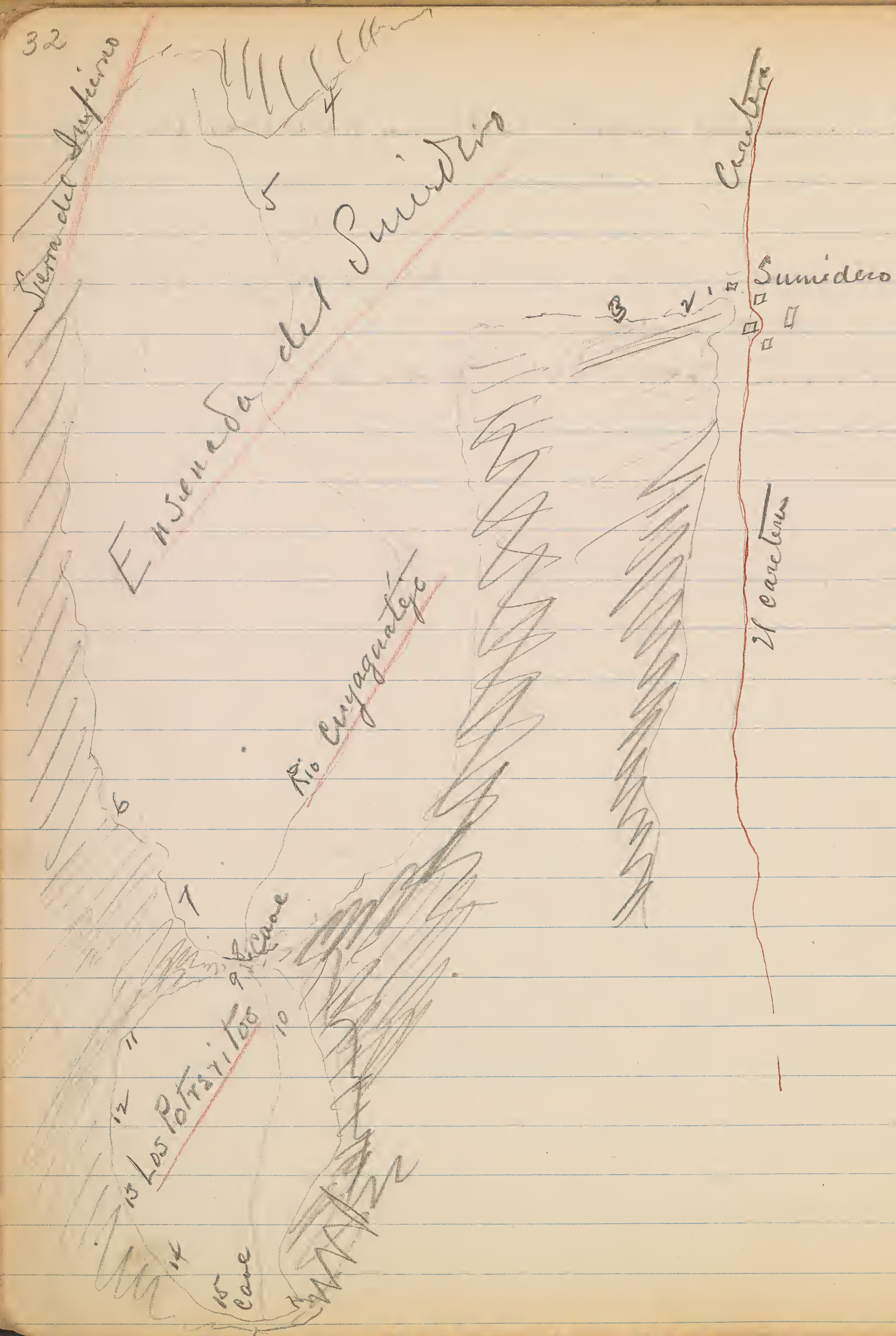
See paper in Congress of Birds.
He of River in 1901.

En. luteo apicula + Callina not in
Emethonidae.

Helicina mestrei. Ar. from Mogote del
Cerro de Calbas has long quickly moving
tentacles the eye being at outer base -
The mouth is projectile and slit longitudinally
thus giving two lips, a right &
left - When feeding these lips open &
close in a very peculiar motion - while
crawling the black slender tentacles &
kept in rapid motion whipping the air.

Notes on Sumidero & Suis Lazo trip.

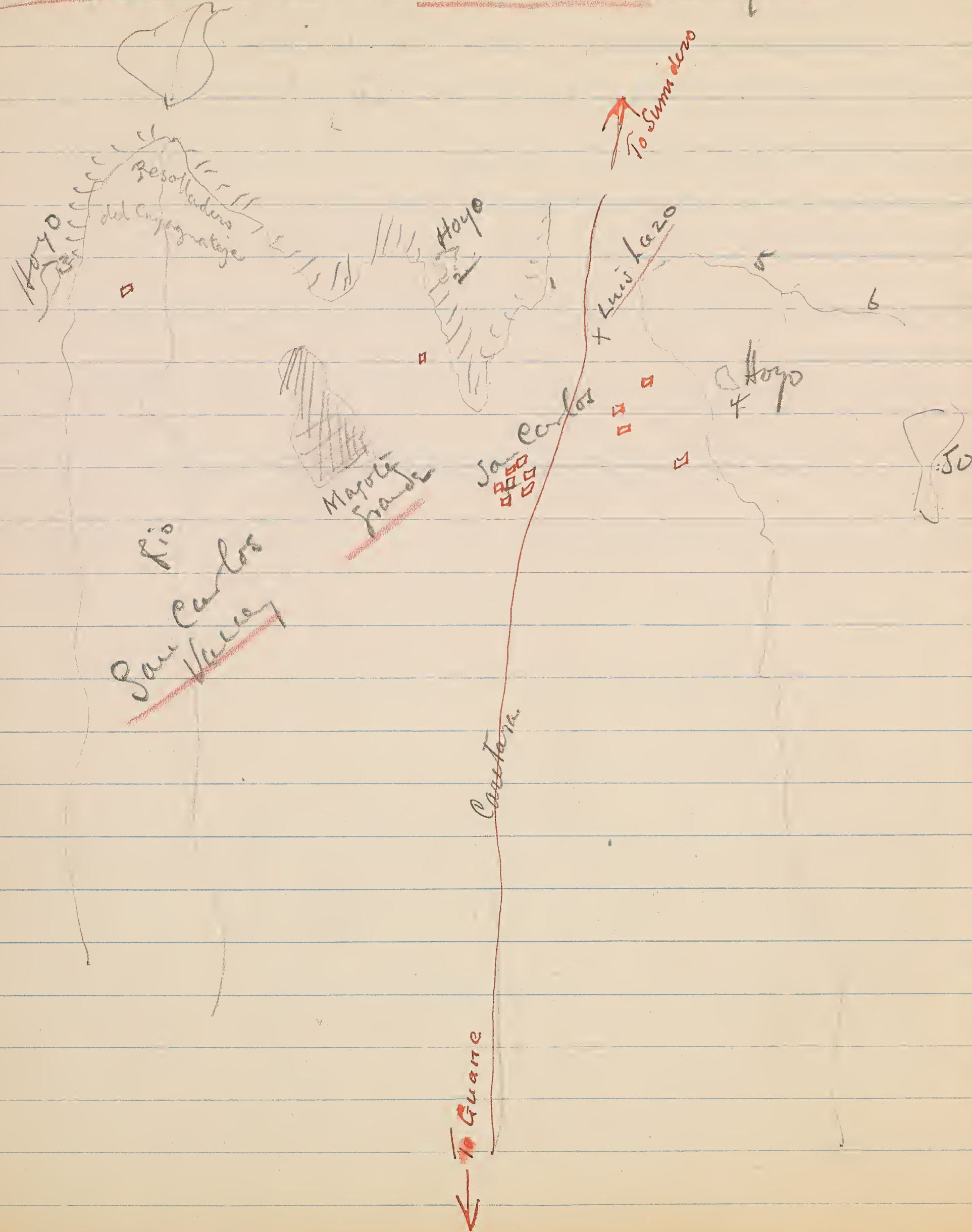
Left Havana Sunday 7 am. (April 17/09) for Pinar del Rio - Hotel Ricardo at noon and coach (at \$10 per diem) for Sumidero. The first range of Mountains are met at Rebadero a locality given in error by Amigo, the actual place of his last trip being just over the Range (Ancient Rock) at a few Magotes called Magotes del Cerro. We stopped there for a few minutes only, resuming same for return journey. The Ancient range crossed we see the Sierra de los Organos beyond & descend into the Valley of Isabel Urrutia. Thence to Cabezas & Sumidero, reaching the latter place about 6³⁰. This road is the new caratena being built from Pinar del Rio to Guane (about 40 miles). Sumidero being about $\frac{1}{2}$ way - stopped at house of pharmacist. Collected next day at Sumidero & Resoldiero. Following day we drove to Suis Lazo & San Carlos - next back to Pinar stopping on the Magotes del Cerro.



at Sanidero points collected marked in
numbers. 4 and 5 Simpson only.

Chon. merasat - Helicina jugulata
Intro. Subung.
Helicina sp. (percrassa, Torr) US.

Luis Lazo - + San Carlos Valley.



Chon. crassum (Torr. M.) at 2

no *Sicilia percrassum* found.

I believe will be at 50 (about 2000')

Mogotes del Cerro de Calvas.

Choan. Tryoni

Choan. haublii + var.

Cyl. hidalgoi

" jugulata ^{brunneum}

Urb. ~~superior~~ mestrei

" cinnerosi

Jean. wrighti (prosp.)

These mogotes are limestone islands in the range of ancient rock.

Isabel Maria collected

Cyl. violacea

Hel. Sagrariana

" jugulata (red mouth)

Choan. inersatium

Choan. blaini

Alcedia

Hel. montana (2.)

San Diego de los Baños Trip Nov. 1913.



Mogote de los Indios (#2)

Chon. sordidum - possibly C. blaini. Comp.

Uro. guirensis but larger + closer striae.

Uro. integra. Requires careful study.

Uro. — n.sp.(?) - Resembles volubilis +

saxosa

comp. cristallina difficultuosa.

distincla fraterna.

Microc. elegans - Probably.

Melaniella gracillima (?)

—— Torre wishes large sp.

La Cumbre (and Bosque #4)

Chon. foveatum var.

Strep. episcopalis

O. ottonis - Comp. sicilis and incisa

Melan. acuticostata Orb.

Uro. irrorata

U. guirensis

Lyobasis angustatus

Alcadia minima

Eul. regina

Megal. mani

Chon. shuttleworthi - Some spec. approach

Ch. incrassatum.

Cepolis parraiana var.

Thysan. stigmatica

Pl. rangeliana

Lig. fasciatus.

Mogote del Bosque (#4)

Chon. shuttleworthi var. minor

Chon. latilabre (s. v. minor) Transition to

C. sagebiené but distinct from both.

Eutro. blandiana (= E. acuminata blandiana)

Mogotes 7 and 8 (near La Guira).

Uro. guirensis

Uro. — n.sp. look for this among last

Has much finer striae, less

whorls - Has 3 lam. on axis

but dif. disposed

Uro. integra.

Melan. cubana Orb.

Chon. sauvallei (S) Very large for Sauvallei - See opus.
much, bet. dent & blaini.

Megal. mani.

Chon. shuttleworthi

Cep. parraiana

Eutr. regina.

#7. Uro. irrorata

Uro. — n. sp. Very difficult. Resemble
notata & brunnescens but
dif. axis.

Oleacina incisa (S)

Chon. latilabre var (S) (see prev. remarks.)

Pl. rangeli

C. parraiana - verging toward C. multistriata

Megal. mani

Eutro. acuminata (or V. columellaris)

Chon. shuttleworthi

E. regina.

La Güira # 10.

Oleac. poeyana or wrighti (S)

Lyobasis angustatus

Chon. blaini (Locotypes)

Chon. shuttleworthi

Megal. mani

Eutr. regina

Eutro. acuminata Velz

Emoda sagraiana

Alcadia dissimulans (S)

Uro. irrorata

Uro. quirensis (Locotypes)

Uro. saxosa (S) Very like.

Cep. parraiana - (Some approach C. parallela)

Chon. sagebienii (S) (Between it & C. latilabre)

Thysan. stigmatica (Hugh spec.)

Mogoli # 5

Pl. auricoma

C. parraiana

Meg. mani (Trans to apertum)

Eutr. regina

Hel. sagraiana

Uro. — sp. - Resem. notata.

Little Mogote # 9.

Choan. sordidum

Eutr. acuminata blandiana.

(E. acuminata is the large sp. with
type loc. San Diego: - Eutr. a. columellaris
is intermediate in size (Rangel) &
blandiana is the smallest (San Diego)
Gundlach reported columellaris from
La Güira also but it is really the
acuminata of Velz.

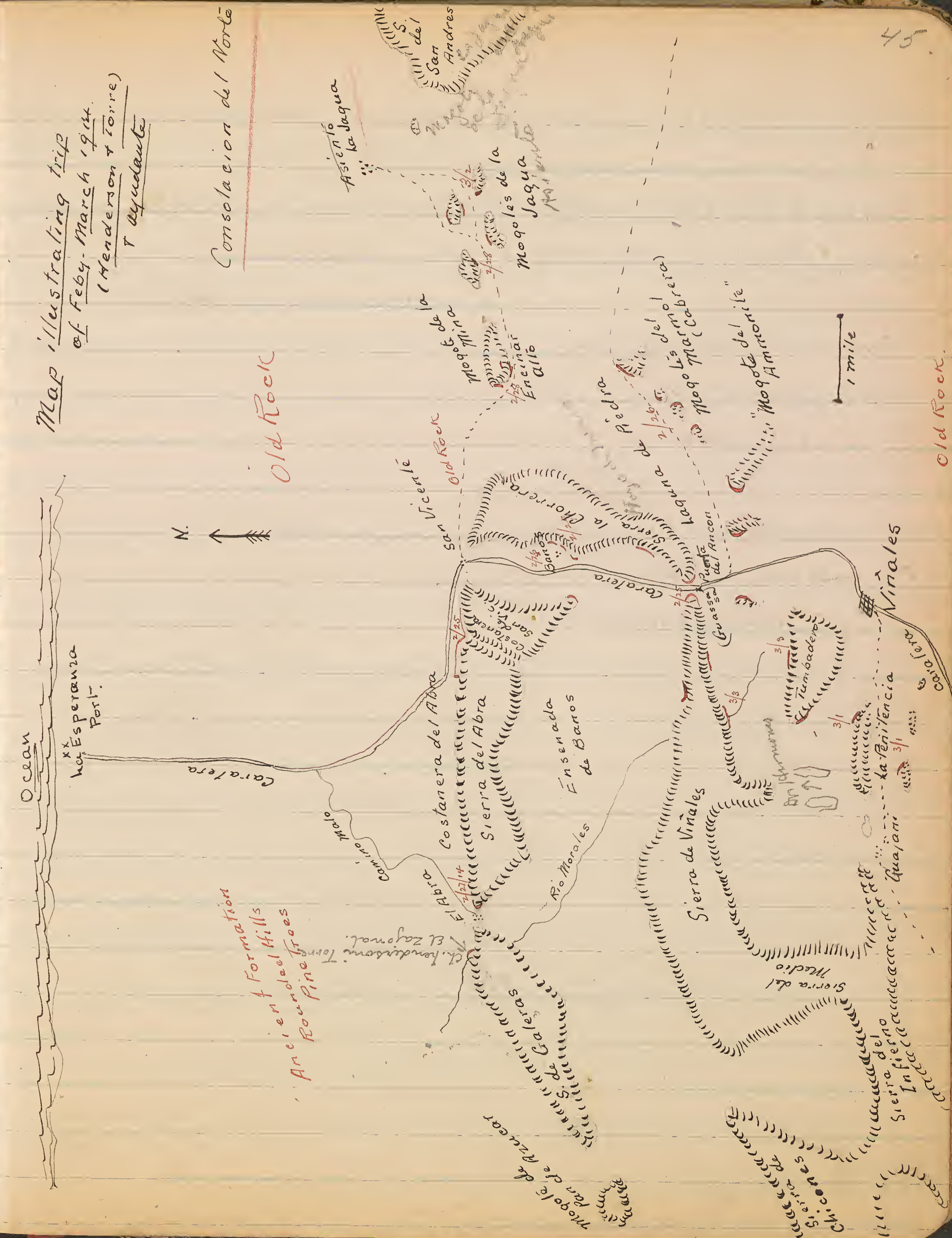
Eutro chrysochasma.

Al. minima

Uro. irrorata.

Map illustrating trip
of Feby. March 1944.
(Henderson & Torre)
T. Ayuda

Consolacion del Norte



Vinales cochero - Alvaro Martinez - (good man)

Laguna de Piedra Mogolés (Feb 26) 1914

(Mogolés de Marmol) (Mog. del "Ammonite")

(Henderson, Torre, ayudante)

Subulina octona Brug.

Opeas pumila Pfr.

O. (hyobasis) gundlachi (Ar.) Pfr.

lep. mon. opalescens Sh.

Pseudosubulina exilis Pfr.

Pichardiella acuticostata Orb.

" *gracillima* Pfr.

Uro. irrorata Gundl.

Uro. terebellata Torres sp. Mogote del Marmol o de Cabrera.

El Abra (Feb 27) 1914

(Torre, Henderson, ayudante)

O. (hyobasis) blandiana Pils

lep. monodon opalescens Sh.

Caeciliodes consobrina Orb.

Pseudosubulina exilis Pfr.

Pichardiella acuticostata Orb.

Oleacina o. straminea Desh.

Uro. irrorata Gundl.

Chondropoma hendersoni Torre. En lo alto del paredón
en la salida del río, en el Zajonal, lugar indicado en
el Mapa adjunto.

Mogoli de la Mina (Feb'y 28) 1914
(Encinar Alto)

(Hend. Torre ayudante)

Subulina octona Brug

Pseudosubulina exilis Pfr.

Pichardiella acuticostata Orb.

" " var. *horrida* Pils

Oleacina o. straminea Desh.

Uro. atropurpurea Ar.

" *thomsoni* Ar.

Baños de San Vicente ("Feb'y 29" = Mch 1) 1914

(Hend. Torre, ayudante)

(June - Barlösch, Clapp, Hend. Greeclaw, Grill, Rodriguez)

Opeas pumilum Pfr.

Obeliscus n. sp.

O. (Lyobasis) guadalupe (Ar.) Pfr.

Leptinaria mon. opalescens Sh.

Pseudosubulina exilis Pfr.

Pichardiella acuticostata Orb

Uro. irrorata Gundl



La Penitencia (Mogotes) (uch 1 - uch 2)

La Laguna Mogotes (uch "2" = 3).

Oleacina o. straminea Desh.

Uro. atropurpurea Ar. (Var.)

" *thomsoni* Ar.

" *assimilis* Ar.

Costanera de San Vicente

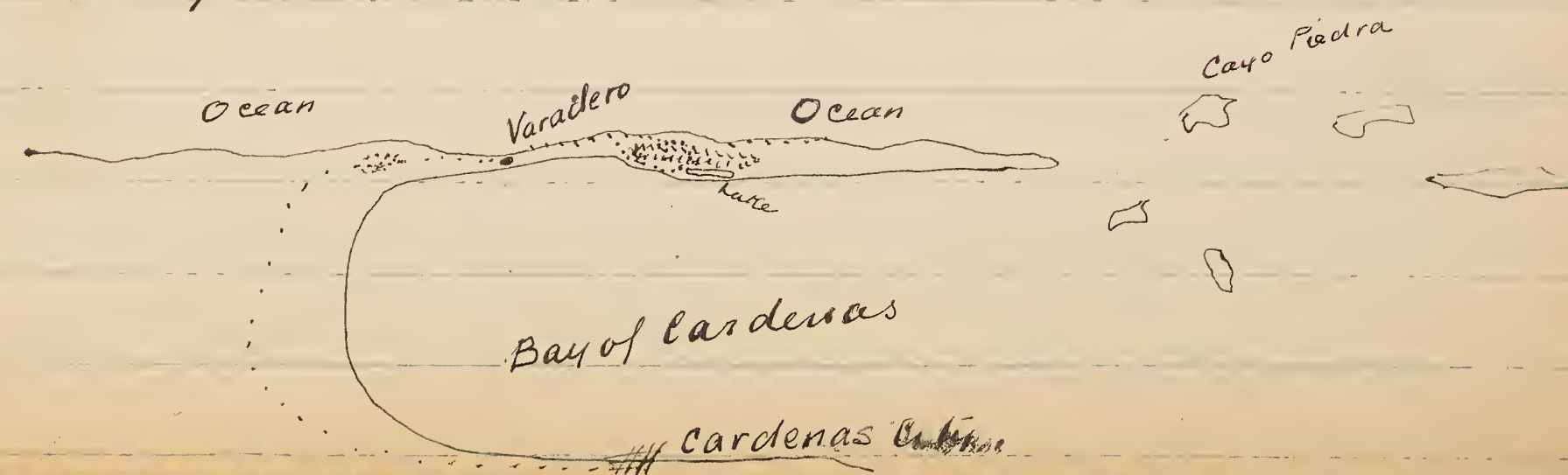
Feby. 1914

North face - (Torre, Hend. Ayudante)

Opeas pumila Pfr.*O. (tyobasis) gundlachi* Fr. Pfr.*O. (") blandiana* Pils*Leptinaria mon. opalescens* Sh.*Caeciliodes consobrina* Orb.*Pseudosubulina exilis* Pfr.*V. Richardiella gracillima* Pfr.*Urocoptis (Coelodinetta) n. sp.*Varadero (near Cardenas)

December 1914 (Torre, Greenlaw, J. B. H.)

(See Nautilus Jan. 1915)

Oleacina solidula Pfr." *subulata* Pfr.*Obeliscus homaloga* Sh.*Pichard. gracillima* Pfr.*Thysan. selenina* Gld" *boothiana* Pfr.*Volvidens tichostoma* Pfr.*Cepolis cubensis penicillata**Uro. poeyana variegata* Pfr." " *garciana* Presas*Mae. gundlachi* Pfr.*Micro. gossei* Pfr." *denticulatus* Gundl*Perion sagraiana* Pfr." " *hologlyptum* Pils*Liguus fasciatus* Mull.*Guppya gundlachi* Pfr.*Pupoides marginatus* Say*Bifidaria**Chondro. pictum* Pfr." *dentatum* Say*Alcacia hispida* Pfr.*Eutro. rupestris* Pfr.

Holguin (Oriente)

Mch. 1915.

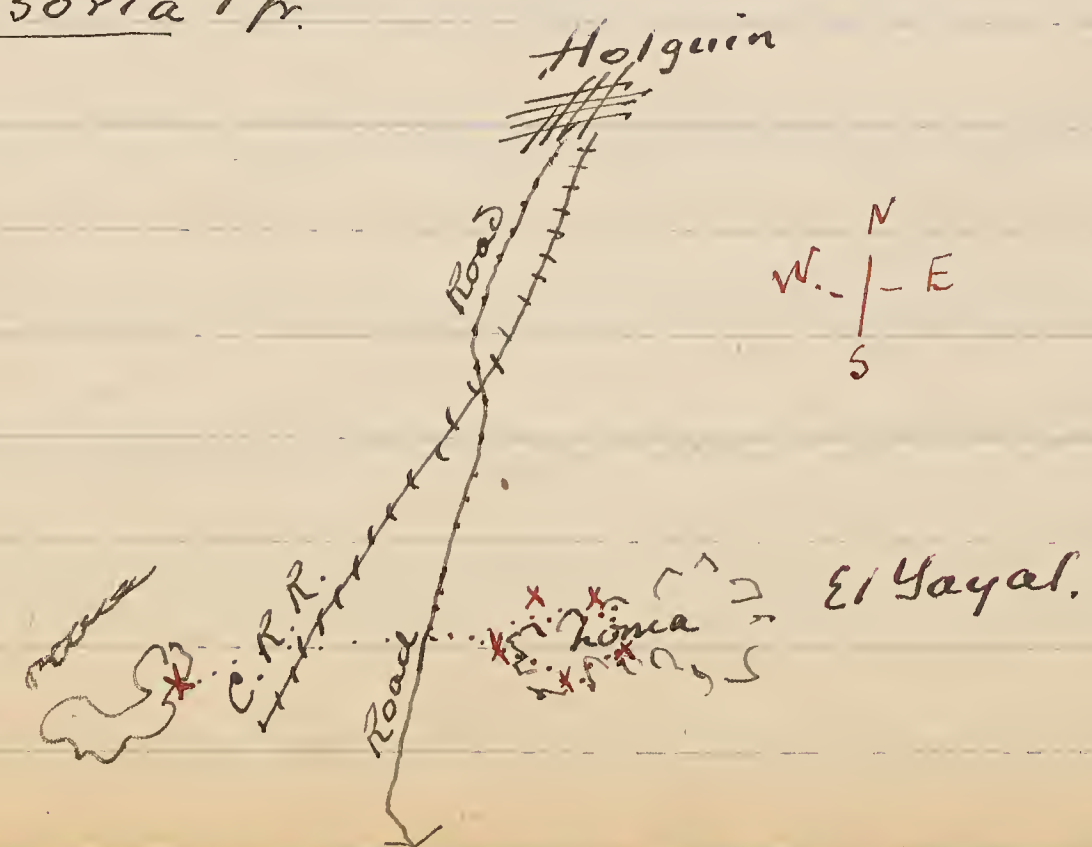
Collected on hill about 4 to 5 Kilom. S. of
City in Barrio "El Yaya!"

(Simpson, Torre & J. B. H.)

Cepolis fuscolabiala (near) on Corojo Palms.Poly. muscarum - on Palms aestivating - large, fine.Chond. canescens ^{Pfr.} tree trunksChoan. "alatum" - Really undescribed - possibly
a var. of pseudolatum.

On south side of Loma near

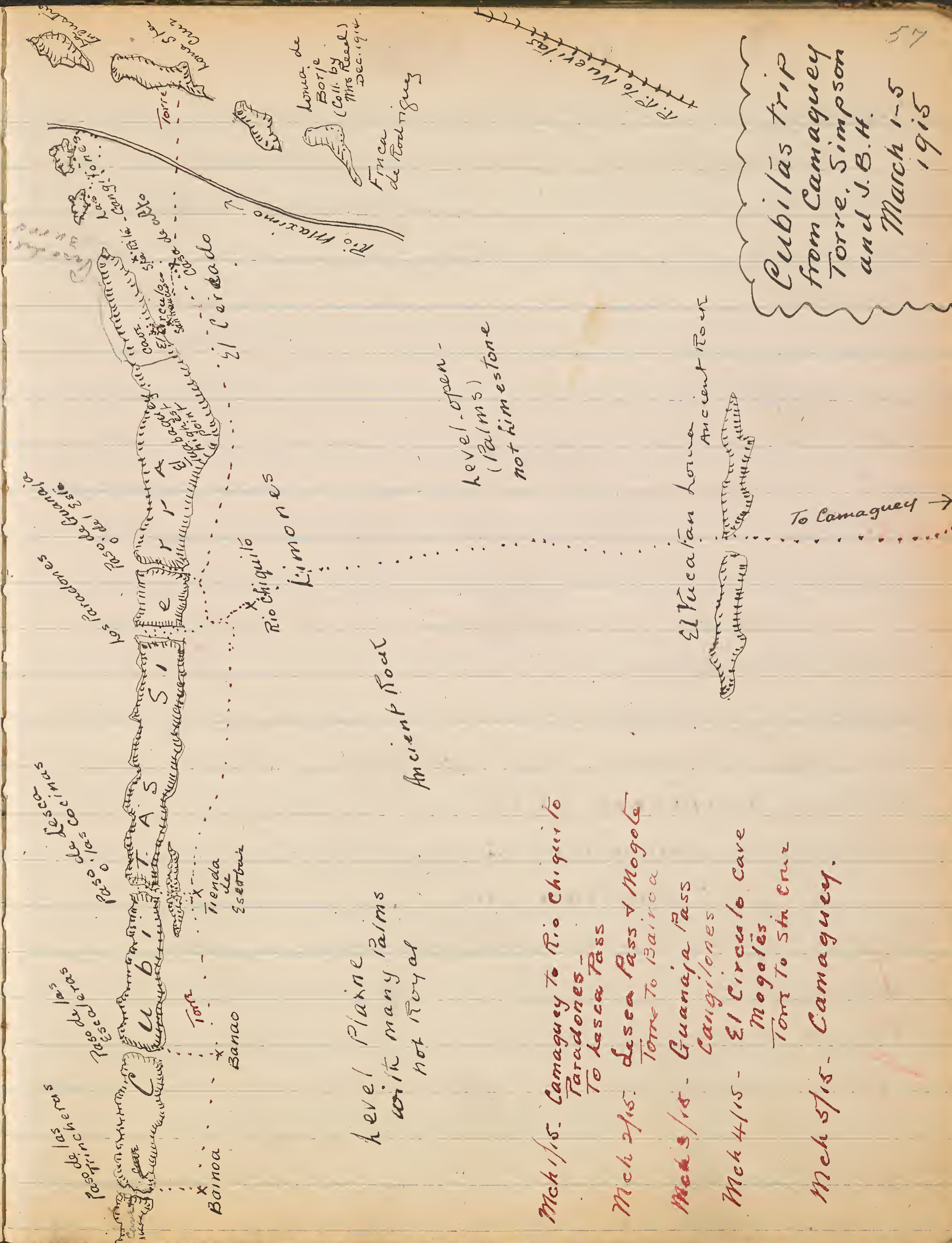
Small cave - under stones.

Pl. marginella ^{Gmel.} Dead, few.Brachypodella angulifera G. few, dead.Helicina few, dead.Obeliscus homalopyra (Sk) ^{Pfr.} few - dead.Circinaria paucispira PoyPl. provisoria ^{Pfr.}

Cubilās Sierra in Camaguey Prov.

Hard limestone hills and central range of about 500' elevation extending W.-E. and not immediately connected with any other system. To the East the Sierra breaks into a series of low hills through which flows the Rio Maximo forming a gorge called "Las Cañilones". E. of river the Mts have a NE-SW trend and are broken into a chain of hills - all limestone. Everywhere about the rock is ancient and vegetation very scant. flat country of palms (not royal) - The limestone of the hills is evidently quite old and overlies the Syenite. On the Sierra the vegetation changes abruptly from the plain type and is fast and lush.

There are few paradones of the Orfan Mts. type. Stone often weathers into the "chente de perro" surface and cave formation is apparent.



Cubilās trip
from Camaguey
Torre, Simpson
and J.B.H.
March 1-5
1915

Cubitas Mts (Camaguey)Paso de Guanaja (o del Este) Mch. 3/15

(See Map ante)

Simpson Torre Hend.*Emoda* n. sp.*Lucidella* n. sp. *rugosa*

"

Opistho n. sp.

" n. sp.

*Helicina**Thysan. boothiana*" *selenina*" *turbiniformis* (Var.)*Guppya gundlachi* (Var.)*Uro. camagueyana* n. sp. (Torre)*Obeliscus homalogyra* Sh. Pfr.*Richardiella manzanillensis* (G.) Pfr." " *trinitensis* Pils*Macroceramus hendersoni* (Small) var.)*Oleacina**Pleurod. marginella* (Var.)Cubitas Mts (Camaguey)Los Paradores (Pass) Mch. 1/15.

(Torre, Simp. Hend.)

Opistho n. sp.

" n. sp.

Chondro canescens Pfr.*Megalom.**Emoda**Helicina*~~*Alcedo*~~*Lucidella rugosa* Pfr.

"

Pl. auricoma" *marginella* Gmel.*Cepolis cubensis* (near *naevula*)

"

Thysan. boothiana Pfr." *turbiniformis* Pfr." *selenina* Gmel." *eucasta* Sh.*Liguus fasc.**Macro. hendersoni*

"

Uro. camagueyana Torre*Oleacina**Pichardella manzanillensis* (G.) Pfr.*Obeliscus homalogyra* Sh.*Pichard. m. trinitensis* Pils

Cubitas Mts. (Camaguey)Paso de Lesca (Cocinas) Mch. 2/15

(Main Range) (Simp. Hnd.)

Opistho n. sp.

" n. sp.

Emoda n. sp.*Cepolis euclasta**Oleacina**Richardella manzanillensis* (G.) Pfr.*Obeliscus homalogyra* Sh. Pfr.*Helicina**Alcadia**Em. lucidella* rugosa Pfr.*Thysan. selenina*" *turbiniformis*" *boothiana* Pfr.*Macro. hendersoni*

"

"

Cepolis naevula Morlet (near)*"Thysan" euclasta* Sh.Cubitas Mts. (Camaguey)Mogote at S. Entrance to Lesca Pass Mch 2-3/15.

(Torre, Simp. Hnd.)

Opistho n. sp.

" n. sp.

Chondro. canescens Pfr.*Megal. camagueyana* n. sp.*Emoda* n. sp.*Pl. marginella* Gmel.*Cepolis naevula* (near)" *Euclasta* Sh.*Macro. hendersoni* (large + small var.)" *Simpsoni* n. sp.*Spiroceramus* n. sp.*Oleacina**Obeliscus homalogyra* Sh. Pfr.*Macro. perlouga* (S.)*Succinea**Thysan. boothiana* Pfr. (Var.)*Alcadia**Pl. auricoma**Uro. camagueyana* Torre

Cubitas Mts (Camaguey)El Circulo Cave (Tuabaguey)and Mogotes about San Francisco

Mch 4-5, 1915 (Simp. Heud.)

Opistho dalli n. sp.

Helicina

" camagueyana n. sp.

Lucidella rugosa Pfr.

Chondro.

"

Megal.

Euoda

Macro. hendersoni

"

Cepolis ("Thysan") euclasta Sh.

"

Pleuro. marginella Gmel.

Thysan turbiniformis Pfr.

"

" boothiana Pfr.

" selenina Gld

" translucens Gmel.

Oleacina o. stram. Desh.

"

Pichardiella manzanillensis (G.) Pfr. + var. trinitensis Pils

Obeliscus homologura Sh. Pfr.

Cubitas Mts (Camaguey)Las Cangilones and Mogotes

Mch. 4/15 (Torre, Simp. Heud.)

Pl. marginella Gmel.

Opistho. n. sp

Cepolis (near naevula)

"

" axlauda Fer.

Chondro. canescens Pfr.

" ("Thysan") euclasta Sh.

" (Hemitro.) varians (!)

Thysan. boothiana Pfr. (Var.)

" incrustata Poey

Circinaria paucispina Poey

Macrocer.

Urocop. camagueyana Torre.

Oleacina

Pichardiella manzanillensis (G.) Pfr.

Obeliscus homologura (Sh.) Pfr.

Euoda

Lucidella rugosa Pfr.

"

Helicina

Loma de Borje (see Cubitas Map) (Camaguey)
(Rodriguez Ranch) (B. H. Hubbard Dec. 1914)

Pl. auricoma

Pl. sagamon (marginella Gmel.)

Cepolis (near naevula)

" ("Thysan") euclasta Sh.

Macro. longa, Hu. n. sp.

Oboliscus homologys (Sh.) Pfr.

Heacina olea. Stam. Desh.

"

Opisthos. n. sp.

Chondro. canescens Pfr.

Megalomias.

Pichardiella manz. trinitensis Pls

Enocla

Lucidella

"

Helicina

Liquus fasc.

Circinaria paucispira Pouy.

Thysan. boothiana Pfr. var.

" *turbiniformis* Pfr.

" *selenina* Gld

" *plagiptycha* Shuttle

Arroyo Hondo (Finca Montejo) Camaguey

3 leagues E. of Camaguey City

Small limestone (Cretaceous) elevation

March 1915 Torre

Urocop. n. sp.

Ctenop. n. sp.

[illegible]

67

Santa Lucia Plantation (Sr. Sanchez)
Orienté - (near Gibara)

Simpson, Torre, Henderson

Los Portales de Camayen (Arroyo Blanco) Mch. 1915.
 Limestone hill N.E. of Central about $\frac{1}{2}$ way to coast.
 Most of surrounding country syenite - limestone
 only capping the higher hills. This hill all lime
 even to base and less hard and altered.

Ramsdenia n. sp. ^{near mirifica Preston} (*Habitatam*?)

Microceramus

Pichardiella gracillima Pfr.

Oleacina

Brachypodella angulifera G.

Thysan. boothiana Pfr.

" *Selenina* Gld

" *saxicola* Pfr.

Obeliscus bacillus Pfr.

Opeas

Leptinaria striosa abdita Poy.

Selenina paucisp'a

Cerata discus

Alcadia

Lucidella granum Pfr.

Helicina

Chondro. n. sp. (n. ernesti)

Coryda nigropicta Ar.

Poly. muscarum

Circinaria paucispira Poy

Santa Lucia Plantation (de Sanchez)Orienté - Mch. 1915."La Silla" Mountain - (Simpson, Torre, Hend.)

A large detached mountain S. of Central about 5 miles - locally called "La Silla de Gibara".

Base ancient rock - capped with hard limestone. Consists of 3 partially separated mts. Collected on Central and W. ones.

<i>Helicina</i>	<i>Ctenop.</i> (gr. of <i>enode</i>)
<i>Lucidella granum</i> Pfr.	<i>Chondrop. canescens</i> Pfr.
"	<i>Coryda alauda</i> Fer.
<i>Alcadia</i>	<i>Pl. marginella</i> (arangiana <i>Poly</i>)
<i>Eulroe</i> n. sp. (S)	" <i>auricoma</i>
<i>Obeliscus homalographya</i> (Sh) Pfr.	<i>Chondro.</i>
<i>Oleacina</i>	<i>Polymita muscarum</i> Lea
"	<i>Circinaria paucispira</i> <i>Poeq</i>
<i>Macro. pictus</i>	<i>Chondrop. oxytrema</i> (G.) Pfr.
<i>Micro.</i>	" <i>ernesti</i> Pfr.
<i>Pichardila m. cienfuegensis</i> Pils	
"	
<i>Selenites</i>	
<i>Thysan. boothiana</i> Pfr.	
" <i>selenina</i> Gld.	
" <i>saxicola</i> Pfr.	
" <i>euclasta</i> Sh.	

Santa Lucia Plantation (de Sanchez)Orienté Mch. 1915.Miramar BeachBetween Vilá and Gibara (Simpson, Torre, Hend.)

Typical rock coast excavated by sea & much weathered limestone - small sand beach - semi-open country back with forest patches. *Cerion* and *Cepolis* & *Polymita* in thick clumps of Guinea grass and dead palm leaves (dry season)

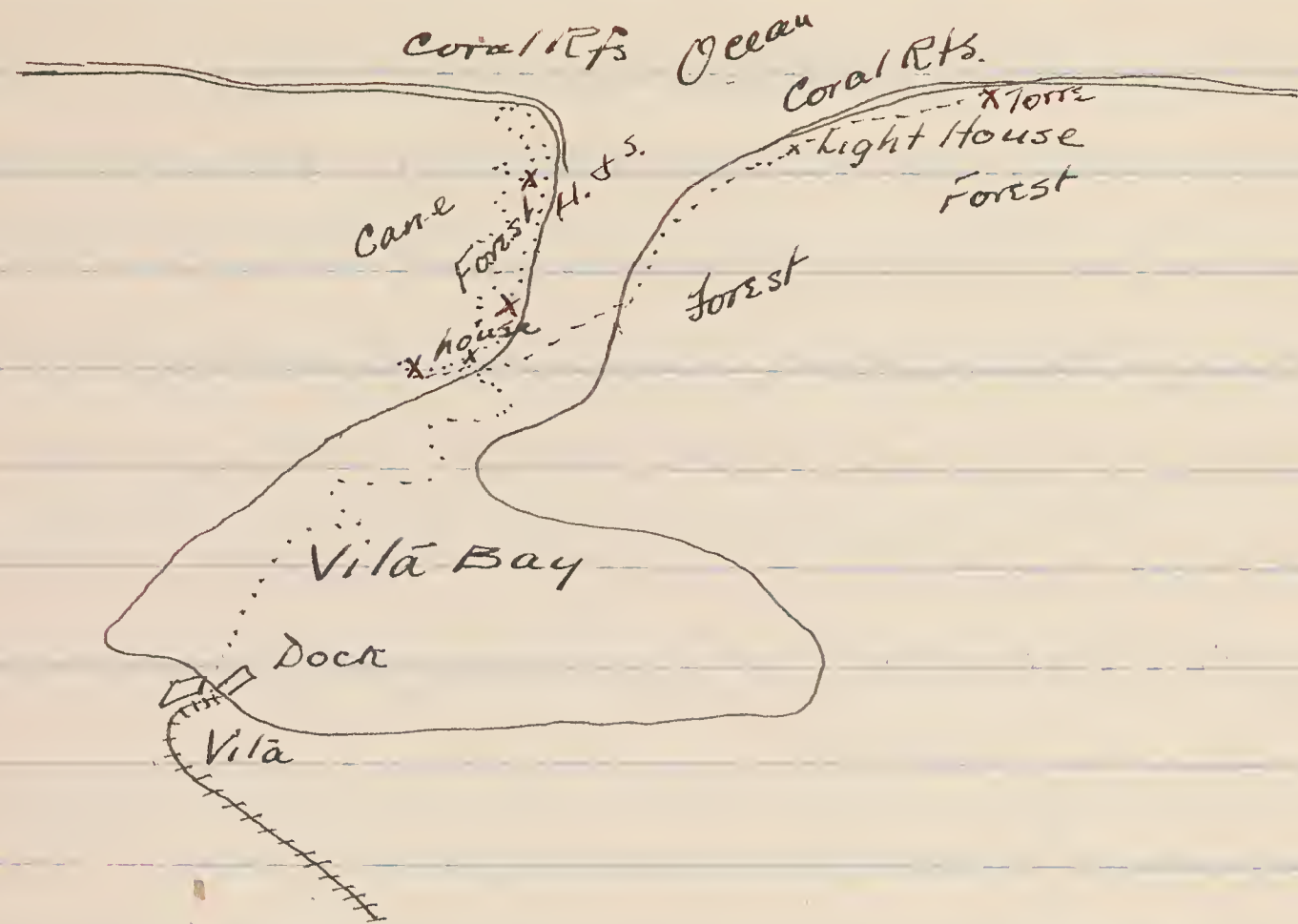
Cerion n. sp.*Cepolis amplecta* Goudt (color form)*Polymita muscarum* Lea*Chondropoma**Ctenop* (gr. of *enode*)

Vila Bay Orienté

Mch. 1915.

(Port of Santa Lucia Plantation)

(Torre, Simpson, Hend.)

*Cerion torrei* (On West side near house)" *ornatum* (On East side beyond light H.)*Chondro.**Coryda nigropicta* alauda Fer.*Cepolis amplexa* Gundi (color form)*Polymita muscarum* LeaSanta Lucia Plantation

(Orienté)

Hill between Central and Vila on right of
track going N. - about midway -

(Mch. 1915. Torre, Simpson, J. B. H.)

Polymita muscarum Lea*Thysan selenina*" *boothiana* Pfr. (typical)*Obeliscus bacillus* Pfr.*Pichardiella scalarina* (G. Pfr.)*Alcadia**Lucidella granum* Pfr.*Eutroch.* (Pfeifferiana Pfr. ?)*Circinaria paucispira* Poey*Ceratodiscus**Chenop.* (gr. of enode)*Coryda alauda* Fer" *nigropicta* Pfr.*Chondro. canescens* Pfr.*Emoda pulcherrima* Lea

74

Hoyo de Manicaragua (Sta Clara Prov.)

about 1 mile S. of Mr. Koop's house

Feb'y 1915. Simpson, Wilcox, J.B.H.

All ancient rock - no limestone - Rolling country - open -

Succinea

Oleacina

Thysan both.

"

Ctenop. immersum Gundi

Cepolis auheri Ors.

Alcadia

Lucidella rugosa Pfr.

Obeliscus homologyra Sh. Pfr.

Pseudobaltea peruviana *Cryptelasmus canteroiana* (G.) Pfr.
Pl.

Planorbis

Limnaea

Physa

75

Loma de Ternero (Sta Clara Prov.)About 6 to 8 miles N. of Hoyo de Manicaragua

Limestone hill. Capped with limestone.

Isolated in granitic region. Compare

Arango's locality "San Juan de las Lleras"

(Feby 1915 - Simpson, Wilcox, J.B.H.)

Megalom.Chounop. uncinatum Ar.Chondro. delatreanum (G.) Pfr.
+ small var.Cten. torquatum
Cten. immersum GündlAlcadia

"

Lucidella rugosa Pfr.Helicina ads. marmorata Orb.Eutroch petrosa Pfr." conica Pfr.Pl. trinitaria GündlCepolis poeyi" auberi Orb.Oleacina

"

Pichard. gracillima Pfr." m. cienfuegensis PilsPseudob.Obeliscus homalogyra Sh. Pfr.Opeas pumila Pfr.Microcer.BulinulusThysan boothiana Pfr." selenina Gtd." saxicola Pfr.Guppya gundlachi Pfr.Urocop lajoncherei Ar." contentiosa Ar." n. sp (near livida Torre)Oleacina oleacea strum.Liguus fas.Loma de Bonachea (Sta Clara)Hill of limestone (on N. side of Careterafrom City of Sta Clara to Remedios) about

5 or 6 miles from city.

(Feby. 1915 - Simpson, J.B.H.)

Chondro. delatreanum (G.) Pfr.
+ small var.Ctenop. — n. sp. 5Megalom.Eutroch. conica Pfr.Lucidella rugosa Pfr.AlcadiaObeliscus homalogyra (Sh) Pfr.Pichard. gracillima Pfr.Oleacina

"

Pl. auricomaCep. poeyi PetitCep. auberi Orb.Thysan selenina Gtd" boothiana Pfr." euclasta ShMicro.BulinulusUro. proteus bonachensis Hen.

"

Liguus fas.Pich. m. cienfuegensis PilsHelicina globulosa Orb.

Loma de Santa Fe (Sta Clara)About 12 miles N.E. of Sta Clara on road toRemedios - Limestone Cap

Feb'y 1915 (Simpson, J. B. H.)

Pl. auricoma *Pl. trinitaria* Gund*Cep. poeyi**Cep.**Thysan selenina**Megal.**Ctenop.* — n. sp. ?*Chondro. delatrenum* (G.) Pfr.*Oleacina oleacea* Stram. Desh.

"

"

*Helicina**Lucidella rugosa* Pfr.*Eutroch. conica* Pfr.*Obeliscus homalogyra* Sh. Pfr.*Pichard.**Liq. fasc.**Uro. mediana alternans* TorreLoma de Capiro (Sta Clara)Limestone hill N. of, and less than a mile
from, the city of Sta Clara.

Feb'y 1915 (Simpson & J. B. H.)

Cepolis auheri Orb.*Thysan. selenina*" *boothiana**Eutroch. petrosa* Pfr.*Lucidella rugosa* Pfr.*Ctenop.* — n. sp. ?*Oleacina*

"

*Pichard.**Obeliscus homalogyra* Sh. Pfr.*Succinea**Bifidaria*

80

Varadero

(Matanzas.)

Sea side resort of Cardenas

Sandy peninsula with central
cove of elevated reef limestone covered
with thick scrub -

Dec. 1914, Torre, Greenlaw, J. B. H.

Thysan inaguensis Weint.

See previous entry
on page -

Exarionones de Nape

(Oriente)

(Finca de Sapanilla) Cayo del Rey

(see map on page)

(about 8 miles f. Hito Cedro) May 1915 - Rodriguez - B.H.

Guide, Jose Barqas Gomez. Estacion de Puerto Oriente

Tulon, Sr. Antonio Gonzales, jefe del acerradero, Hito Cedro.

<i>Pistula interstitialis</i> (G.) Pfr.	<i>Pl. (Thel.) baracoensis</i> (Gut.) Poey
<i>Choanopoma storchi</i> Pfr.	<i>Pl. (Thel.) a. provisoria</i> Pfr.
<i>Chondropoma canescens</i> Pfr.	<i>Megal. ungula</i> Poey
<i>Xenopoma humboldtianum</i> Pfr.	<i>Succinea</i> sp.
<i>Varicella (ds) swiftiana</i> Pils	<i>Uro. (Ideo.) geminata</i> Pfr.
<i>Oleacina incerta</i> Roe.	<i>Uro. (Gongy.) hilleri</i> Pfr.
<i>Obeliscus terebraster</i> Lam.	<i>Uro. (Gongy.)</i> sp.
<i>Pleurodonia marginella</i> Guel	<i>Brachypodella angulifera</i> G.
<i>Cepolis alanda</i> Fer	<i>B. -</i> n. sp.
<i>Cep. melanocephala perlevala</i> Pils	
<i>Polymita picta</i> Bom + <i>scaphurosa</i> Mor.	
<i>C. (Hemitrochus) incipeta</i> Poey + var.	
<i>C. (Cysticopsis) pumphioides</i> Pfr.	
<i>Thysan. boothiana</i> Pfr.	<i>Helicina subglobulosa</i> Poey
<i>Thysan. selenina</i> Gld.	<i>Alcadia proxima</i> Gundi
<i>Circinaria paucispira</i> Poey	
<i>V. Pichardiella multcosta</i> (G.) Pfr	
<i>Emoda submarginata</i> Gray	

Exarionones de Canapa

(Oriente)

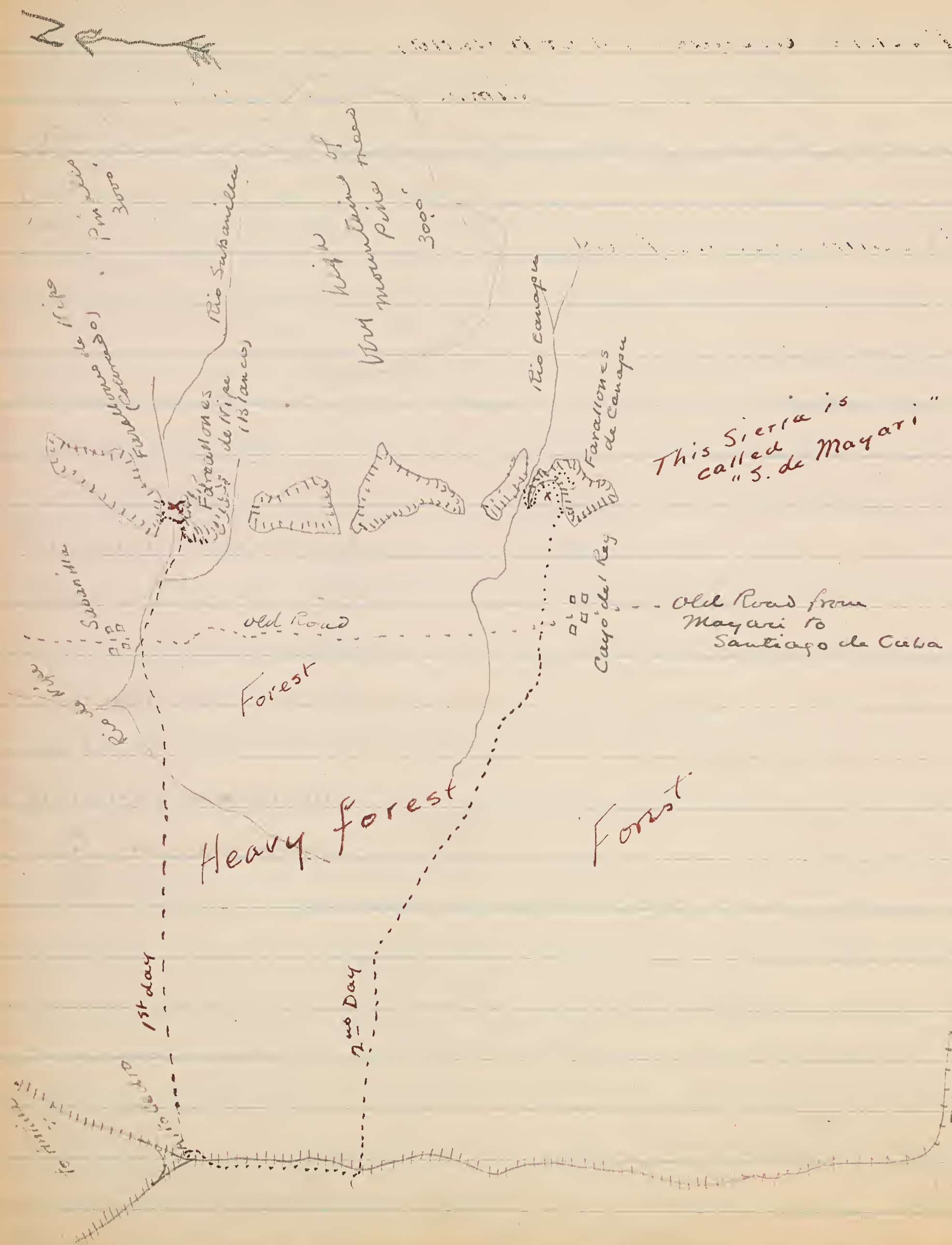
Finca de Cayo del Rey

(map, next page) May 1915 - Rodriguez + J. R. H.

about 10 miles from Hito Cedro

This is probably the ancient locality of Wright.

<i>Pistula interstitialis</i> (G.) Pfr.	<i>Eutroc. pfeifferiana</i> Pfr.
<i>Choanopoma storchi</i> Pfr.	<i>Pseudobalea lata</i> Gundi
<i>Chondropoma canescens</i> Pfr.	<i>Geometania lirata</i> Poey
<i>Adamsiella chordata</i> Gundi	<i>V. (Pichard.) scalarina</i> (G.) Pfr.
<i>Xenopoma humboldtianum</i> Pfr.	<i>Emoda submarginata</i> Gray
<i>Varicella (ds) swiftiana</i> Pils	<i>Pl. (Thel.)</i> <i>canapa</i> n. sp.
<i>Oleacina incerta</i> Roe.	<i>Macro. paxi</i> Gundi
<i>Oleacina cyanozonaria</i> Gundi	<i>Uro. (Gongy.) hilleri</i> Pfr. (var)
<i>Obeliscus terebraster</i> Lam.	<i>Brachy. angulifera</i> G.
<i>Pleurodonia marginella</i> Guel.	<i>Alcadia proxima</i> Gundi
" <i>soberina</i> Fer.	
<i>Cepolis alanda</i> Fer	
<i>C. melanocephala perlevala</i> Pils	
<i>Polymita picta</i> Bom (<i>scaphurosa</i> Mor.)	
<i>C. (Cysticopsis) pumphioides</i> Pfr.	
<i>Thysan. boothiana</i> Pfr	
<i>Circinaria paucispira</i> Poey	
<i>Proserpina depressa</i> Orb.	



Puentes Grandes (near Havana)

Simpson, Barfsch, Gill. (May 1914)

Subulina octona, Brug.

Oleacina o. straminea Desh.

Uro. poeyana Orb.

Cabañas (Light House Hill, harbor entrance)
(Henderson, Patron) June, 1914.

Subulina octona Brug.

Opeas pumila Pfr.

Opeas micra Orb.

Oleacina o. straminea Desh.

Uro. poeyana Orb. (also Potrero Constante; also islands in bay)

Bahia Honda (N. of city at entrance to Grave yard)
(Bartsch, Clapp, Henderson, Rodriguez)

June 1914

Subulina octona Brug.

Uro. poeyana Orb.

Puerla del Ancon (Viñales) (see maps pp

Feb 4/14 - Hend. Torre, Ayudante.

June 14 - Bartsch, Simpson, Clapp, Hend.

Opeas pumila Pfr.*O. (Hyobasis) gundlachi* Ar. Pfr.*Pseudosubulina exilis* Pfr.*Pichardiella acuticostata* Orb.*Oleacina o. straminea* Desh.*Uro. irrorata* Gundl.Mogolē at Kilometer 14 on Road (also Mog #2 + 3 on
W. side of Road)
from Pinar del Rio to Viñales

(Feb 4/14 - Torre, Hend, Ayudante)

(June 14 - Clapp, Bartsch, Simpson, Hend.)

Opeas pumila Pfr.*Leptinaria mon. opalescens* Sh.*Caeciliodes consobrina* Orb.*Pseudosubulina exilis* Pfr.*Pichardiella acuticostata* Orb.

" " (Mog. #2)

" *gracillima* Pfr.

Mogotes de la Vega (Viñales)

June, 1914. (May 30/14)

(Clapp, Barlsch, Hens. Rodriguez)

O. (hyobasis) gundlachi (Ar.) Pfr. 1, 2, 3, Tumb.,*lep. monodon opalescens* Sh. (Dos Hermanos)*V. Richardiella acuticostata* Orb.

" " " (Tumbadero)

Oleacina o. straminea Desh. 1.*Uro. irrorata* GundlSierra de Viñales (Viñales)

May 31/14 - Clapp, Barlsch, Hens. Rodryf

O. (hyobasis) gundlachi Ar. Pfr. (Little Mog. N.E. of Hermanos)*Oleacina o. straminea* Desh.*Uro. thomsoni* Ar.

Pan de Guajaibon (see map p. 100)

(San Jose de la Sagua)

(Barlsch, Clapp, Rodriguez, Henderson)

O. (hyobasis) n. sp.

V. (Pichardiella) a. horrida Pils

O. o. straminea Desh.

Uro. crenulata G.

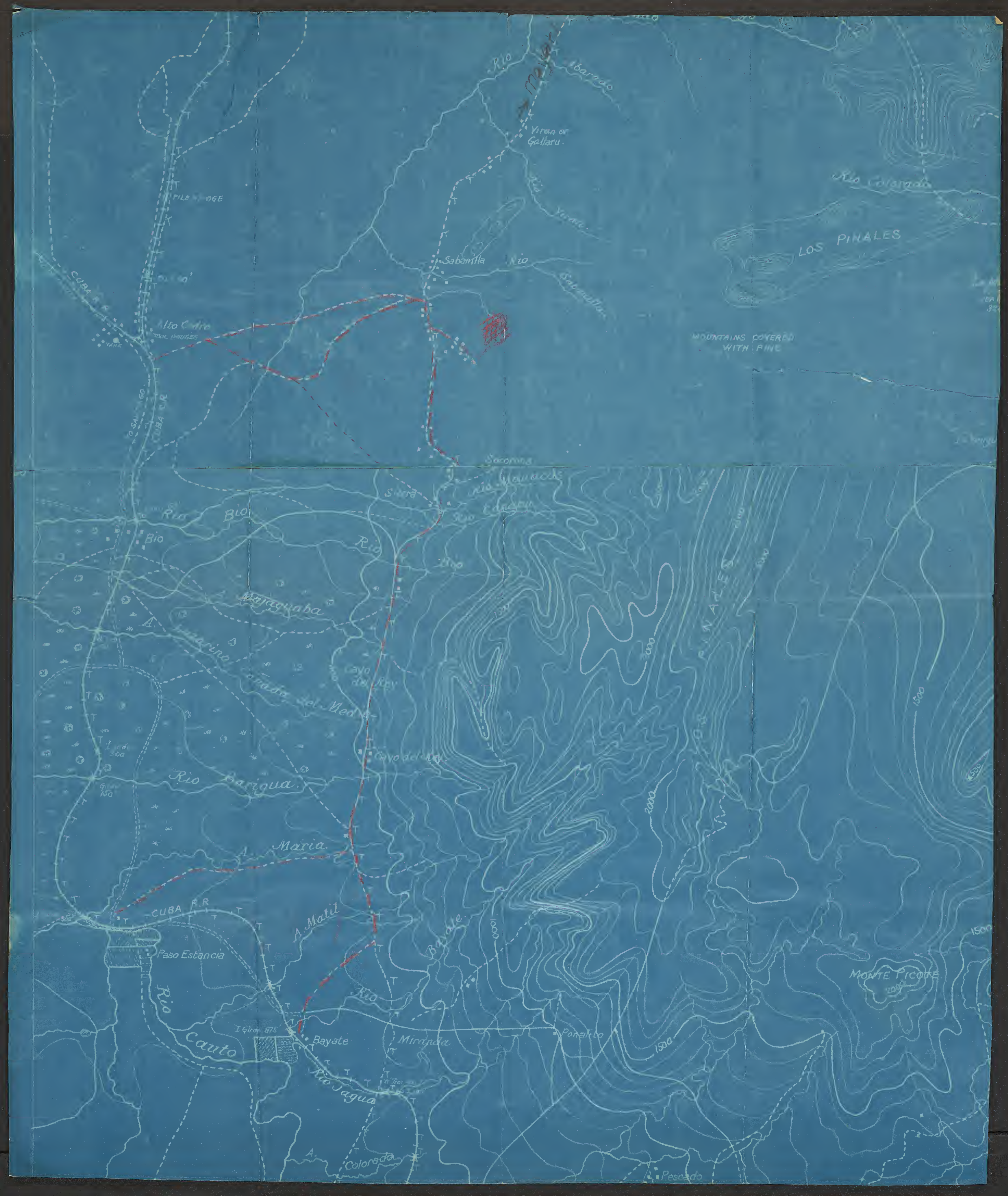
Pan de

p. Rodriguez, Henderson)

Pichard

Oleacina

Theococowid
Ctenopoma
Chonotpana



Pan de Guajabon (see map p.)(San Jose de la Sagua)

(Barlsch, Clapp, Rodriguez, Henderson)

*O. (kyobasis) n. sp.**V. (Pichardiella) a. horrida Pils**O. o. straminea Desh.**Uro. crenulata G.*Pan de Guajabon (see map)

North Side

(Barlsch, Clapp, Rodriguez, Henderson)

*Pichardiella a. horrida Pils**Oleacina o. straminea Desh.*

Pan de Azucar (Terre, Simp. Clapp, Henderson) May 1914.

Oleacina o. straminea Desh.

Cape San Antonio (Light House station) May 1914

(Bartsch, Clapp, Rodriguez, Patron, Hend.)

Oleacina o. straminea Desh (Var.)

Mendoza (near Guane)(Barrera Sup^a) 1914.

Bartsch, Clapp, Rodriguez, Henderson)

Uro. dautzenbergiana Cr. (Mogote: on stones in fields (Simp.))

" coerulans Poey (Mog. + Fields)

" discors lagunillensis Pils (Fields)

I

Polymita picta (+ form *testudinea*)

" "*fuscolimbata* T.

" "*roseolimbata* T.

" "*nigrolimbata* T. (+ form *fulminata* T.)

" "*iolimbata* T. (+ form *muscata* T.)

II

Polymita sulphurea

" s. *flammulata*

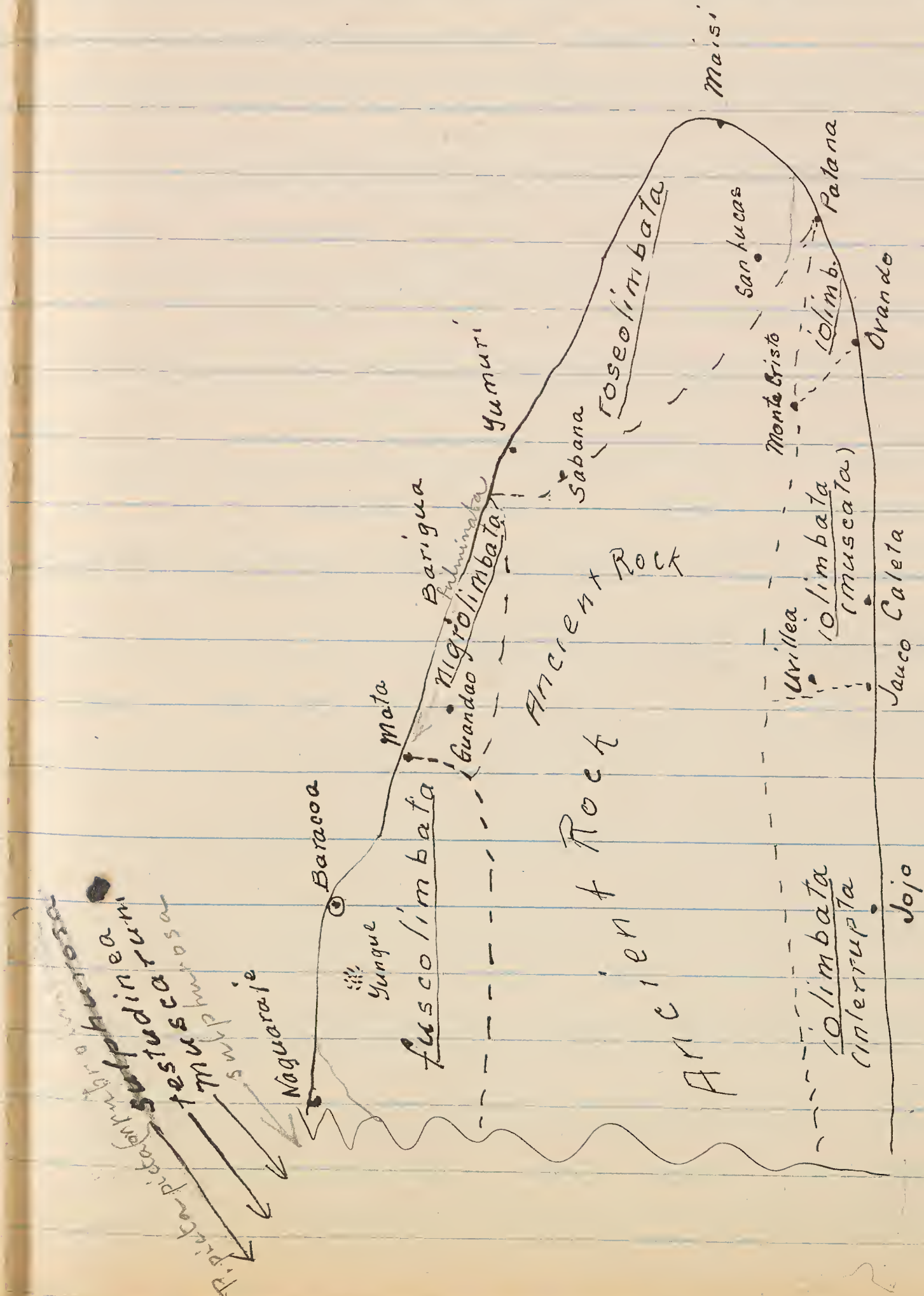
" " " (*zigzag*)

III

Polymita brocheri [Maisi]

" " (a) [Cuesta del Palo]

" " (3) [Orando]



Loma de Anafe (Havana Prov.)

Nov. 1915 (J.B.H.)

"Falda" refers to foot on S. side near the
property of Shaler Williams.

"La Barranca" refers to deep gorge near top
of hill on North side.

- | | |
|---|---|
| <i>Thysanophora boothiana</i> Pfr. (F) | <i>Oleacina o. straminea</i> Desh. (B, F) |
| " <i>selenina</i> Gld. (F) | " <i>solidula</i> Pfr. B. F. |
| " <i>saxicola</i> Pfr. (F) | " <i>sp.</i> ? |
| " <i>stigmatica</i> Pfr. (Barr.) | <i>Proserpina depressa</i> Orb |
| <i>Emoda submarginata</i> Gray (B) | <i>Rectoleacina suturalis</i> Pfr. ^E |
| <i>Helicina adspersa</i> Pfr. B. F. | <i>Varicella</i> (Pich.) <i>gracillima</i> Pfr. ^F |
| <i>Alcadia minima</i> Pfr. (F) | " " <i>acuticostata</i> |
| " <i>rotunda</i> Orb. (Var.) (B) | <i>Var. horrida</i> Pils (B) |
| <i>Eutrochatella sloani</i> Orb (F, B) | <i>Pl. (Thelidomus) auricoma</i> Fer. |
| " <i>rupestris</i> Pfr. (F) | <i>Cepolis</i> (J.) <i>multistriata</i> Desh. |
| " <i>conica</i> Pfr. (F, B) | " (Cyst.) <i>cubensis</i> Pfr. |
| <i>Chondropoma poeyanum</i> Orb (F) | <i>Urocop. cyclostoma</i> |
| " (<i>pfeifferianum</i> ?) n.sp. (B) | <i>anafensis</i> Hend. (B) |
| " <i>ottonis</i> Pfr. (F, B) | <i>Uro. stans</i> |
| <i>Ctenopoma regulosum</i> Pfr. (F, B) | <i>Uro. poeyana</i> Orb |
| " <i>nodulatum</i> Poey (B) | <i>Microceramus</i> ^{peruvianus} <i>pittetianus</i> |
| <i>Megalomastoma apertum</i> Poey (B) | <i>anafensis</i> Hend. |
| <i>Liguus fasciatus</i> , Müll (B) (Western type) | |

Marianao (Havana)

Nov. 1915 (Torre, J.B.H.)

(A) near the town.

(B) On road to Beach near Country
Club - Fence on E. side of road.

Thysanophora selenina Gld. (A, B)*Chondropoma poeyanum-pfeifferianum* (A)*Opeas micra* Orb. (*contracta* Poey) (A)*Subulina octona* Chem. (B)*Urocoptis sinistra* Torre (B)" *poeyana* Orb (B)*Succinea* (A)*Polygyra paludosa* Pfr. (A)*Bulinulus exilis* Gmel (A)

(+ other mogolēs)

Isabel Maria 4th Mogolē S.E. right side of road going S.
(P. del R.) June, 1916 Hud. & Bartsch

Cepolis (Jeann.) *parraiana* Orb. (medium size - light phase)

Emoda sagraiana Orb. (1st Mog. S.E.) minor

" " " (3rd Mog. S.E.) minor

Eutro. regina Mor. + small var.

Helicina adspersa marmoratā Orb.

Alcadia velutina Poey (Mog.)

Eutrochatella jugulatā Poey

Megalomastoma mahnii Poey

Annularia blaini (G.) Pfr.

Chondropoma shuttleworthi Pfr. (trans. to *incrassatū*)

" " *incrassatū* Wr.

Oleacina o. straminea Desh.

Rectoleacina cubensis Orb.

Urocoptis violacea (Wr. & Pfr.)

Liguus fasciatus Mull

Luis Lazo. Central isolated Mogolē. (Hend. & Bartsch) June 1916
map next page.

Cepolis (Jeann.) *parraiana* Orb.

" " *subtussulcatā* (Wr. & Pfr.) (var. minor)

Polygyra johannis Poey

Cepolis arctistria Pfr.

Pleurod. (Zachrysia) guanensis Poey

Emoda sagraiana Orb. (minor)

" " *percrassa* Torre (Fine red lip)

Eutrochatella regina Mor.

Helicina adspersa Pfr.

Posepina depressa Orb.

Clenopoma bilabiatū Orb.

Chondropoma shuttleworthi Pfr. (*incrassatū* Wr.)

" *sagebieni* Poey

Oleacina o. straminea Desh.

Rectoleacina cubensis Orb.

Pichardiella pichardi Ar.

Urocoptis bartschi Hend. n. sp.

Liguus fasciatus Mull

Luis Lazo. The range on the East of the valley on some maps called Sierra de San Carlos.

Hend. + Barisch. June 1916.

Cepolis (Jeann.) *parraiana* Orb. (Medium size - light color)

Pleurod. (*Zachrysis*) *guanensis* Poey (strongly ribbed)

Emoda sagraiana Orb. (minor)

" " *percrassa* Torre (red + white top)

Eulrochatella regina Mer.

" *jugulata* Poey

Ctenopoma bilabiatum Orb.

Chondropoma sh. incrassatum Wr.

" *sagebieni* Poey

Oleacina o. straminea Desh.

Rectoleacina cubensis Orb.

Liguus fasciatus Mull



Luis Lazo. Main sierra forming western boundary of the San Carlos valley. Hend. + Barisch June 1916.

Thysan. stigmatica Pfr.

Eulro. regina Mer

Alcadia velutina Poey

Eulrochatella jugulata Poey

Ctenopoma bilabiatum Orb.

Chondropoma sh. incrassatum Wr.

" *sagebieni* Poey

Rectoleacina cubensis Orb.

Pichardiella pichardi Ar.

Microceramus paivanus Pfr.

Liguus fasciatus Mull

Sierra de Limones (P. del R.) El Abron.

Hend. + Barlsch June 1916.

Cepolis (Jeann.) *parruiana* Orb.*Thysan. stigmatica* Pfr.*Eulrö. regina* Mor.*Helicina adspersa marmoratā* Orb.*Rhytidopoma undosum* (G.) Pfr.*Annularia majusculum* Morl.*Chondropoma* n. sp. (near *C. excisum*)*Pichardiella a. horrida* Pils*Urocoptis torquatā* Morel." *saxosa* PoeySierra de LimonesEl Toro

(Hend. Barlsch Torre Rod.) June, 1916.

Thysan. stigmatica Pfr.*Eulröch. elongatā* Orb.*Megalomastoma mani* Poey*Rhytidopoma undosum* (G.) Pfr.*Annularia majusculum* Morl.*Chondropoma fovealūm* (G.)" n. sp. (near *excisum*)*Pichardiella a. horrida* Pils*Lyobasis gundlachi* (Fr.) Pfr." *blandianus* Pils*Leptinaria monodon* C.B. Ad. (!)*Urocoptis torquatā* Morl." *saxosa* Poey*Microceramus elegans* (G.) Pfr." *latus* (G.) Pfr. var.

Rangel. Gorge of Taco-Taco river. June 1916.
Hend. & Barlsch, Torre.

Cepolis (Jeann.) *parraiana* Orb.

Thysan. stigmatica Pfr.

Pl. (Zachrysia) rangeliana Pfr.

Emoda sagracana Orb.

Eutro. regina Mor.

Helicina adspersa marmorata Orb.

Alcadia rotunda Orb.

Eutro. straminea politula Poey

" *chrysochasma* Poey

" sp.

Megalomastoma mani Poey

Rhytidopoma undosum (G.) Pfr.

Colobostylus rangelinus Poey

Chondropoma claudicans Poey

" " minor

Oleacina o. straminea Desh.

Rectoleacina episcopalis Mor.

Pichardiella a. horrida Pils

Urocoptis torquala Morl.

Rangel (Arriba) Region about "Colonia del Rio"
"Colonia Puerio Rico"; "El Rangel" and
the mountains between the upper
parts of Taco-Taco & Santa Cruz rivers.
Barlsch, Hend. Rodriguez, Torre.

June, 1916.

Cepolis (Jeann.) *parraiana* Orb.

Thysanopora booth. pinarensis Hend.

Pl. (Zachrysia) rangeliana Pfr.

Cepolis (Cyst.) *letranensis* Pfr.

Emoda sagracana Orb.

Eutro. regina Mor.

Helicina adspersa Pfr.

" " *marmorata* Orb.

Alcadia rotunda Orb.

Eutroch. straminea More

" sp.

Megalomastoma gundlachi Pfr.

Rhytidopoma undosum (G.) Pfr.

Annularia majusculum Morl.

Chondropoma claudicans Poey

Liguus blainianus Poey

Rangel (Abajo). Region from entrance of Taco-Taco
river gorge East along mountain base almost
to Santa Cruz river - El Espiro. June 1916.

Hend. Barisch, Torre, Rodriguez.

(This is the finca of Blain & likely his
locality of "Rangel")

Cepolis (Jeann.) *parraiana* Orb.

Thysan. *stigmatica* Pfr.

Pl. (*Zachrysia*) *rangeliana* Pfr.

Emoda *sagraiana* Orb.

Eultr. *regina* Mor.

Alcadia *rotunda* Orb.

Proserpina *depressa* Orb.

Eutrochatella *pyramidalis* Sby.

Megalomastoma *mani* Poey

Ctenopoma *bilabiatum* Orb.

Annularia *majusculum* Morl.

Chondropoma *claudicans* Poey

Rectoleacina *episcopalis* Mor.

Oleacina *O. straminea* Desh.

Urocoptis *torquata* Morl.

" *sauvalleana* (G.) (at El Guabinacho)

" sp.

Liguus *blainianus* Poey

Rio Santa Cruz de los Pinos #1. Entrance to valley
and up about 1 mile. (Paradones)
June 1916. Hend. Barisch, Torre, Rodr.

Cepolis (Jeann.) *parraiana* Orb.

Thysanophora *selenina* Gld.

Pl. (*Zachrysia*) *rangeliana* Pfr.

Emoda *sagraiana* Orb.

Eultr. *regina* Mor.

Liguus *blainianus* Poey

Alcadia *minima* Orb.

" *rotunda* Orb.

Proserpina *depressa* Orb.

Eutrochatella *acum. columellaris* G.

" *chrysochasma* Poey

Megalomastoma *mani* Poey

Ctenopoma *bilabiatum* Orb.

" *undatum* G. Pfr.

Annularia *majusculum* Morl.

Chondropoma *claudicans* Poey

Oleacina *O. straminea* Desh.

Rectoleacina *cubensis* Orb.

" *suluralis* Pfr.

" *episcopalis* Morelet

Urocoptis *sauvalleana* (G.)

" sp.

Rio Hondo.

N. of San Cristobal in the mountains
a day's ride from Candelaria.

Hend. Barbach. Rodriguez. June 1916.

Cepolis (Jeann.) *parraiana* Orb.

Thysan. stigmatica Pfr.

" *boothiana pinarensis* Hend.

" *selenina* Gid.

Polygyra paludosa Pfr.

Pl. (Zachrysia) rangelina Pfr.

Emoda sagraiana Orb.

Eulro regina Mor.

Helicina adspersa Pfr.

Lyobasis angustatus (G.)

Alcadia minima Orb.

Urocoptis acus Pfr.

" *rotunda* Orb.

Proserpina depressa Orb.

Eulrochatella straminea Mor.

" *sp*

Megalomastoma mani Poey

" *gundlachi* Pfr.

Annularia majusculum Mor.

Chondropoma claudicans Poey (var. ^{Ottonis Pfr. var.})

Oleacina o. straminea Desh.

Rectoleacina cubensis Orb.

" *suluralis* Pfr.

Peña Blanca (Mt.) - Near "El Huro" and "Finca Dolores"
and S. of Bahia Honda.

Barlsch, Hend. Rodriguez. June 1916.

Cepolis (Jeann.) *parraiana* Orb.

Thysanophora *selenina* Gld.

Emoda *sagraiana* Orb.

Helicina *adspersa* Pfr.

Alcadia *minima* Orb.

" *rotunda* Orb.

Proserpina *depressa* Orb.

Eulrochatella *straminea* Morelet

" " var.

Megalomastoma *gundlachi* Pfr.

Chondropoma *ottonis* Pfr.

Oleacina *o. straminea* Desh.

Rectoleacina *cubensis* Orb.

" *suturalis* Pfr.

Urocoptis *acus* Pfr.

" *poeyana* Orb.

Lomas del Cuzco (El Mulo) - High Hill N. of the

Finca Merced + of the complex
known as "Loma del Cuzco."

(Hend. Barlsch, Rodrig.) June 1916.

Cepolis (Jeann.) *parraiana* Orb.

Thysan. *stigmatica* Pfr.

Pl. (*Zachrysia*) *rangeliana* Pfr.

Emoda *sagraiana* Orb.

Helicina *adspersa* Pfr.

Alcadia *minima* Orb.

" *rotunda* Orb.

Proserpina *depressa* Orb.

Eulrochatella *straminea* *politula* Poey

" " var.

Megalomastoma *mani* Poey

" *gundlachi* Pfr.

Chondropoma *claudicans* Poey

" " (minor)

" *ottonis* Pfr. (var.)

Pichardiella *a. horrida* Pils *P. acuticostata* Orb.

Lyobasis *angustatus* (G.) *Succinea* sp.

Urocoptis *decolorata* (G.) Pfr.

Candelaria #1. (Frias) N.W. of town at foot of
mountains.

(Hend. Barlsch, Torre, Rodriguez) June 1916.

Cepolis (Seann.) parraiana Orb.

Pl. (Zachrysis) auricoma Fer.

Megalomastoma mani Poey

Anaularia majusculum Mart.

Chondropoma ^{ottonis Pfr} ~~claudicans~~ Poey

Finca Dolores (see Peña Blanca) near Lomas del Cuzco.

Hend. Barlsch, Rodriguez. June 1916.

Cepolis (Seann.) parraiana Orb.

Alcadia rotunda Orb.

Santa Catalina (Lomas del Cuzco) Among the Cuzco
Hills - S. of site of Cuzco.

June, 1916. (Hend. Barisch Rodriguez.)

Cepolis (Jeann.) *parraiana* Orb.

Helicina *adspersa* Pfr.

El Mogolē (Candelaria) Entrance to Hills from
plain. South of "Cuzco."

Hend. Barisch, Rodriguez.

June 1916.

Cepolis (Jeann.) *parraiana* Orb

Polygyra *poludosa* Pfr.

Meridia *calinda* Orb.

Chondropoma *ottonis* Pfr.

Urocoptis *poeyana* Orb.

Esquela de las Frias - Candelaria - P. del. R.

Stone fence - Torre. Simpson, J.B.H.

March 20/20

Polygyra pulchrosa Pfr.*Chondropoma ottonis* Pfr.*Annularia majusculum* Orb. - small race -Road between Havana and Batabanoat Kilometer 14 - Stone fence - March 1920

Torre. Simpson, J.B.H.

Urocoptis poeyana Orb." *elegans* ~~at~~ *auroriana* Orb." *humboldtiana* Afr.*Chondropoma dentata* Say" *pfeifferiana* Poey" *ottonis* Pfr.*Alcadia hispida* Pfr.*Oleacina solidula* Pfr.*Cepulis* (Dean.) *multistriata* Desh.*Thysanophora selenina* Gld.

Libano
Monte Toro, Guantánamo (Oriente) (March, 1911)

About Cave, source of Guaso River

(Barlisch, J.B.H., Ramsden, Rodriguez)

"Thysanoph." *Euclasta* Shuttl.

Zonitoides subapex H.

" n.sp.

Guppya gundlachi, Pfr.

Cepolis (Lys) *pemphigodes* Pfr.

" *alauda* Fer.

" (Hem.) *gilva* Fer

Pleurodonlè (Poly.) *Soprina* Fer.

Pleurodonlè marginella Gmel.

" (*Zachrysia*) *proboscidea* Pfr.

Ceratodiscus minimus (G.) Pfr.

Rhytidipoma jeannereti Pfr.

Diploma archilēctonica (G.)

Chondropoma dilatatum (G.) Pfr.

Annularia ramsdeni Pils + Hen.

Lucidella tantilla Pils

" *granum*

Eulrochalēlla Pfeifferiana (Hv.) Pfr.
 Var.

Alcadia (poor spec.)

" (poor spec.)

Pseudobatea latus (G.)

Bifidaria

Circinaria paucispira Poey

Troserpina depressa Orb.

Geometania lirata Poey

V. Pichardiella

" "

" "

" *swiftiana* Pils

"

Leptinaria

Coeciloides consobrina Orb.

Oleacina o. straminea Desh

" *translucida* Gundl

Obeliscus terebraster Lam

" *maximus* Poey

Urocoptis sowerbyana Pfr.

" *pilsbryana* Ramsden

Brachypodella angulifera G.

Macroceramus gundlachi, var.

" *pazi* var.

Thysanophora boothiana Pfr.

" *selenina* Gld.

" *saxicola* Pfr.

" *plagyoptica* Sh.

Emoda submarginala Gray

U.S. Naval Station at Guantánamo Bay Cuba

March 1917 (Barlisch, J.B.H.)

Stations: (A) Fishermans Point.

(B) Cuzco Beach and Trail

(C) Windmill Beach and trail.

(D) About Rifle Range

(E) Island, head of Cumberland Lake

(F) Hill, Bayward from Rifle Range

(G) Bogueron Trail N.E. of

Amusement House.

H. Hospital Point.

Thysanophora selenina Gld.

" *inaguensis* Weinl. (C)

Macroceramus festus (G.) Pfr. (F, E, H, D, A)

" (var.) (B)

Cepolis (*Hemilrochus*) *lucipela* Poey (A, B, G.)

" " *velasqueziana* Poey (A, B.)

" (*Coryda*) *ovumreguli*, Lea (H, A, G, D.)

Pleurodonlè (Z.) *aur. provisorio* Pfr. (B)

Polymila versicolor Born (D, G.)

Chondropoma marginalbum Gundl. (G, C, D.)

Alcadia exserta Gundl. (E.)

Caimanera (Orientē) Cuba

(Mch. 1917)

(Bartsch, J. B. H.)

Stations: (A.) "Island" Hill in flats on E.
Side of R. R. track about
1/2 mile from Caimanera.

(B.) Hills on W. side of
track about 1 1/2 miles
from Caimanera.

Succinea (B)

Oleacina translucida (Cr)

Macroceramus festus (G.) Pfr. (A)

Cepolis (Hemilio) lucipela Poey (B)

" (Coryda) ovumreguli, Lea (B)

Pleurodontē (Zachrysia) auricoma provisorio Pfr. (A. B.)

" (Caraculus) marginella Fer. (A. B.)

Alcadia exserta Gudi

La Vigia - Hill back of city of Trinidad

Mch. 1920 - Rodriguez, Simpson, J.B.H.

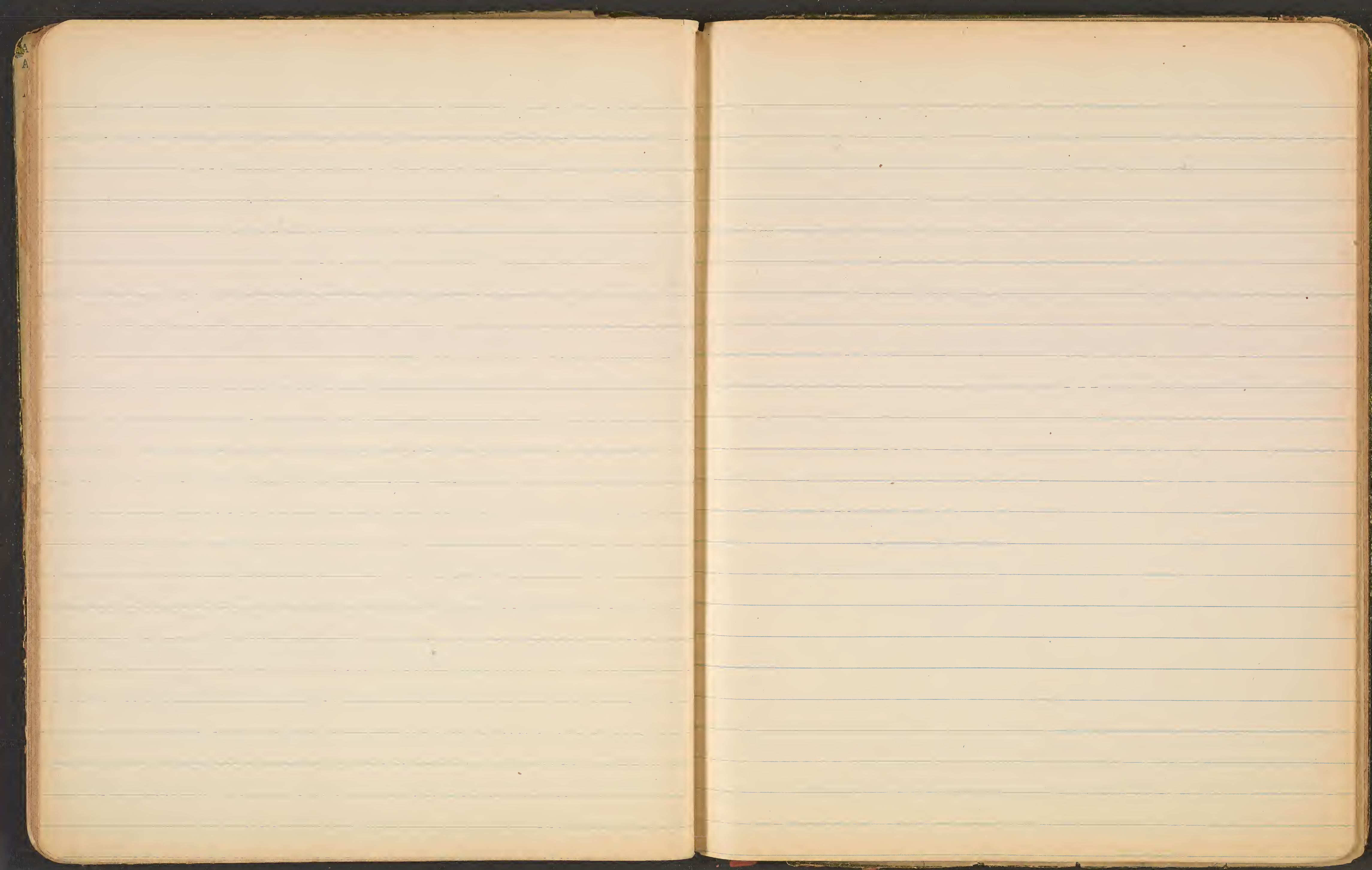
Zachrysia auricoma var*Cepolis gilva* Fer.*Microceramus trinidadensis* Pils*Urocoptis canteroiana* (G.) Arango*Thysanophora suavis* G.*Cryptelasmus canteroiana* Pfr.*Oleacea orysacea* Orb." *cyanozoaria* G.*Megalomastoma**Cistula inculta* Poy*Chondropoma violaceum* Pfr.*Emoda ciliata* Poy*Liguus fasciatus* MuhlSopimpa - On R.R. between Fomento and Trinidad - About 3 Kil South at Kil. 46-45 - Mch. 1920

Rodriguez - Simpson - J.B.H.

*Succinea**Thysanophora boothiana*" *suavis**Zachrysia trinitaria**Macroceramus canimarensis**Urocoptis producta*" *trinidadensis**Eutrochatella petrosa**Alcadia hispida*

" sp.

*Emoda ciliata**Helicina adpersa lanieriana**Lucidella rugosa**Obeliscus homalopyra**Cryptelasmus canteroiana**Oleacina cyanozoaria*" *orysacea**Chondropoma violaceum**Cistula illustris* Poy*Megalomastoma bituberculatum*





Mogote #5 43
 Mogotes #7 & 8, 41
 Mogote #9, 44
 Mogote Bosque 39,41
 Mogote Colorado 39
 Mogote Grande 34
 Mogote Indios 39,40
 Mogote de la Mina 45,48
 Mogote del Ammonite 45,116
 Mogotes del Cerro 31
 Mogotes del Cerro de Cabras 36
 Mogotes del Marmol 45,46
 Mogote de Pan de Azucar 45
 Mogotes de la Jagua 45
 Mogotes de la Vega 90
 Monte Cristo 99
 Monte Libano 125
 Aguacate 99
 Nueva Gerona 25,26
 Nevitas 57
 Oriente 71,72,73,82
 Pando 99
 Palana 99
 Palenque 15,16,17
 Palmara 91
 Pan de Azucar 94
 Pan de Guajaibon 92,93
 Paso de Guanaja 57,58
 Paso de las Escaleras 57
 Paso de las Trincheras 57
 Paso de Lesca 57,60
 Paso Estancia 84
 Paso Real 10
 Pena Blanca 116,119
 Perdices 8
 Pinar del Rio 31,89,90,102
 Portales 10
 Puentes Grandes 85
 Puerta del Ancon 45,88,91
 Rangel 110,111
 Remedios 78
 Resolladero 104
 Rifle Range 126
 Risoidiero 31
 Rosario 1,5,7,8,9
 Rio Canapu 84
 Rio Chiquito 57
 Rio Cuyagueteje 32
 Rio de Nipe 84
 Rio Hondo 115
 Rio Maximo 56,57
 Rio Morales 45
 Rio Sabanilla 84
 Rodriguez Ranch 64
 Sabana 99
 Sabanilla 84
 San Carlos 31,34
 Sanchez 69,71
 San Cristobal 115
 San Diego 40
 San Diego de los Banos 39
 San Francisco 57,62
 San Jose 26
 San Jose de las Lajas 22
 San Jose de Sagua 92
 San Juan de las Lleras 76
 San Lucas 99
 Santa Catalina 120
 Santa Clara Prov. 75,76,77,78,79
 Sta. Cruz 57,111,112
 Santa Cruz de los Pinos 113
 Santa Fe 25,26
 Santa Lucia 69
 Santa Lucia Plantation 70,71,72
 Santa Rita 57
 San Vicente 45
 San Vicente Banos 49
 Serpentine Hills 39
 Sierra Cubitas 57
 Sierra de Chicones 45
 S. de Galeras 45
 Sierra de Guam 10
 Sierra del Abra 45
 Sierra de las Cassas 25,26
 Sierra de Limones 108
 Sierra de Linares 39
 Sierra del Infierno 32,45
 Sierra del Medio 45
 Sierra de los Caballos 25,26
 Sierra de los Ortanos 31
 S. del San Andres 45
 Sierra de Mayar 84
 Sierra de San Carlos 104,105
 Sierra de Vinales 45,49,91
 Soledad Plantation 12,13,14
 Sopimpa 130
 Sumidero 31,32,33,104
 Taco Taco River 110,111,112
 Tapaste 22
 Teneria 10
 Tienda de Escobar 57
 Trincheras Pass 57
 Trinidad 129,130
 Tuabaguey 57,62
 Tumbadero 45,49

U. S. Naval Station at
 Guantamo Bay 126
 Uvillea 99
 Valley of Isabel Maria 31
 Varadero 53,81
 Vinales, 10,45,88,89,90,91
 Vinales Cocherro 46
 Vita 71,73
 Vita Bay 72
 Western Cape 26
 Windmill Beach 126
 Yucatan 57
 Yumuri 99
 Yumuri Valley 11
 Yunque 99



Copy of John B. Henderson's field notes.

(C U B A)

Hacienda Jiqui, Rosario,

Ensenada de Cochinos, Cuba. February, 1908

The Cienega de Zapata (Orientae) is back about 3 miles from shore line.

Collecting here now (dry season) is poor. The few operculates are found dead in open spaces among limestone rocks and on the ground near the shore, but no specimens taken in the forest. (see later) The few live specimens found same station. No Liguus seen whatever, even fragments (see later), yet all natives say they are abundant on trees in the rainy season. Cerion iostoma Pfr. occurs along the shore on vegetation, but usually hidden from open sight, concealed in crevices of wood and upon dead palm leaves, generally in colonies or patches. The Cepolis supertexta are only found on dead palm leaves, generally the withered ones in the folds of which they can hide, and by their similar color make discovery difficult. Dead specimens of these, as of almost every species other than the very small ones, are inhabited by hermit crabs, with which this region fairly swarms. The Ampullaria apparently occurs in limited numbers wherever there is fresh water, but are abundant on the vegetation in the Cienga proper. They live concealed from sight and are preyed upon by the water fowl, according to the report of natives. Shells of Ampullaria are met almost anywhere tenanted by hermits, even on the shore of the bay.

Helicina sparingly on dead palm leaves near the salt water, but dead specimens were taken a mile inland in cleared patches in woods.

Polygyra paludosa on wet ground along edge of Cienga.

Ancylus and Amnicolids were taken on dead leaves and pieces of palms lying in Cienga.

A very few dead specimens of Cep. multistriata taken under stones in cleared spaces in woods. C. cubensis, or an allied species, was found dead sparingly in some very open woods near edge of Cienga.

This country is perfectly flat, of sharply weathered limestone, in places broken into fragments which lie scattered about. Often deep pot holes. Underneath the surface rivers from the Cienga flow to the sea occasionally appearing on the surface. At the margin of sea the rock is weathered into the sharpest possible surface, and is cut under by waves forming overhanging shore line.

About two or three feet above
water line. Tide 12 to 18 inches.

Further exploration developed two operculates, especially the large one about $\frac{1}{2}$ mile from shore, under stones in the heavy forest. These were taken alive. The smaller operculates and an Opisthosiphon were taken alive near the shore under stones, slabs of weathered limestone and particularly in the loose friable dirt under the stones.

The Urocoptis was taken dead (a very few live specimens) under stones and in the debris and humus along side of paths in woods.

The Thysanophora were taken same station as Urocoptis, and generally occur wherever other ground snails are found.

A few fragments of Liguus found near shore.

A more careful search among the palms (Thyrox parviflora) for Cepolis supertexta has netted us a very large series varying in size, height of spire, and color. They seem to occur in zones along the shore, being far more abundant along 50 or 100 feet of shore line and then practically disappearing for $\frac{1}{4}$ mile or so, although the growth of palms continues along apparently the same. The leaves most frequented are those longest dead and most folded. Occasionally specimens were taken on tree trunks, under bark, etc., and evidences of them are found in the deep woods where there are no palms at all.

In places along the shore, the Cerions were found in great abundance, clinging to stones, tree trunks, leaves, and on the ground.

A visit to the shore across the Bay directly opposite developed no land shells whatever. The character of the coast there is very different from here, being sandy, shallow. The swamp comes to the beach and vegetation is small and scrubby. Such a pest of mosquitoes, any very thorough work was impossible.

The above shows roughly the typical elevation and types of tree growth at Rosario.

The wonderful clearness of the water is very striking, probably 60 feet bottom may be seen, corals, sea fans, neptune cups and white sand.

Above tide on the sharp rock occurs several marine mollusks,

Drawing

notably Nerita peloronta and tessellata and versicolor, Litorina tessellata. Tectarius nodulosa (?) is abundant on tree trunks along with Cerion. Tectarius muricata also abundant same station as last, but not so high on trees. Neritina pupa (very dark form) in patches on rocks. Fissurella barbadensis and several Acmaea are fairly abundant about high tide mark also the large Chiton. A number of marine species, Columbellas, Cerithia, Conus, etc., are found sparingly in cavities of rock below high tide.

Dredging off this shore is rendered impossible by the corals. Many very desirable marine species are brought up in a more or less broken condition by hermit crabs, showing their probable presence not far off if a dredge could only be used.

Tide pools farther down the bay showed up in some quantity, Livona pica, Leucozonais leucozonais, Conus nus, Purpura patula, Neritina pupa typical in color, Litorina mespilum (in great quantities), Mytilus dominiguensis, Columbella mercatoria, Litorina tessellata.

At Perdices 7 miles S. from Rosario no land shells were found alive, except Cerion iostoma. The very few dead shells taken were of the same species as found here. Beginning at about Perdices the shore is more bold, the elevation of 10 to 15 feet, found here only a distance back then comes to the shore, forming a cliff theoretically, but in effect so much eaten into by the sea it presents much the same appearance as here:

Drawing

The shore line back for 10 to 20 feet is excessively sharp "honey-comb" limestone with no soil and barren with frequent pot holes and underground rivers. Back of this is generally a fringe of scrub and palms more or less dense and usually filled with thorny shrubs. This is probably 100 feet wide and merges into the forest.

Showing typical shore line and a caleta or River in Rosario neighborhood. Depths feet--not from actual example.

Drawing

List of Rosario species;

Chon. dentatum
 " caudeanum (so-called) = caranasesense P. & H.
 " wilcoxi (large sp.)
 Ct. clathratum Gld. (see Torre notes)
 Thysan. boothiana (or vuytesi) Thysan. debilis Pfr.
 Cepolis cubensis v. pennicillata
 " supertexta
 " multistriata
 Pleurs. auricoma
 Poly. paludosa
 Helicina adspersa
 " rugosa
 " globulosa
 Alcadia minima
 Oleacina oleacea straminea
 Urocoptis poeyana
 Sphaerium cubensis
 Ancylus
 Ampullaria conica
 Cerion iostomum

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 Helicina adspersa
 " rugosa
 " globulosa
 Alcadia minima
 Oleacina oleacea straminea
 Urocoptis poeyana
 Sphaerium cubensis
 Ancyliu
 Ampullaria conica
 Cerion iostomum

VINALES	Uro. vinalensis
PASO REAL	" nubila
S. DE GUAM	" coerulans
PORTALES	" discors
TENERIA	" incerta (possibly discors - paradoxa)
GUAM	Eutro. subunguiculata
	" remota
	" jugulata
PASO REAL	" chrysochasma
VINALES	" regina
	Hel. sagraiana
SIERRA DE GUAM	Chon. shuttleworthi
	" sagebieni
	Ct. bilabiatum
	Cepolis paralella (typical)
	Helicina jugulata
	" elongata
	" remota
	" sagraiana
	Uro. coerulans
	Megal. mani

Notes from Pilsbry's Cuban shells

Alcadia nitida Pfr. - Yumuri Valley

" *rotundata*? - La Salud, S. of Havana

(Similar to last but more rotund, last
whorl being large and globose)

" *hispida* - (Typ. from Trinidad and Cienfuegos)

" *hispida* var. *gundlachi* Pfr. ? Havana and Matanzas.

(Quite similar to *nitida* but a bit smaller
and hispid)

See Bull. Geol. Soc. America, VI, 103; VII, 67 (1896).

The Havana form of *nitida* has been called glabra.

Soledad Plantation, 20 miles S. E. of Cienfuegos

First visit, Simpson, Wilcox and J. B. H.

Helix auberi (so called)

Pseudobalea perversa

Cten. immersum (near) *Torrellia* (*Torrelliaca*) *simpsoni* H. & B.

Thysan. boothiana

Oleacina orysacea

Thysan. saxicola (or *boothiana*)

Uro. variegata

Cten. torquata

"*Thysan.*" *debilis* Pfr.

Locality: Small loma on side of track from river landing to
Central and about 3/4 mile from Central.

Soledad Plantation 2d visit, February, 1915

Simpson, Wilcox and J. B. H.

Locality: 1st same as last visit

2d two hills E. of Central about 2 and $2\frac{1}{2}$ miles.

(beyond botanical experimental station)

Cepolis "auberi"	Alcacia
" poeyi	Helicina
" bonplandi	Pichardiella nr. cienfuegensis Pils.
Pl. trinitaria	Obeliscus homalogyra Sh. P. + var.
Thysan. suavis	Chondropoma violaceum Pfr. var. atkinsi Hen.
" boothiana	Liguus fasc. (dead)
" selenina	Eutroch. petrosa Pfr.
Uro. n. sp. (near <u>livida</u> Torre)	Megalomas
Uro. cienfuegosensis Pils.	Guppya gundlachia
Opisthos. torquata Gut.	Macrocerin
" simpsoni Torre	Thysan. n. sp. (suavis group)
"	Cryptalasmus canteroiana (G.) Pfr.
Oleacina orysacea	Guppya (n. sp.?)
" o. straminea Desh.	
Emoda	
Lucidella rugosa Pfr.	

Soledad Plantation (E. of Cienfuegos) Sta. Clara

Fence on N. side of carretera just before reaching Cumanayagua. February, 1915.

Simpson, Wilcox and J. B. H.

Chondropoma delatreanum (G.) Pfr.

The smoother var., small, less convex whorls.

Eutrochatella petrosa Pfr.

Cryptalusmus canteroiana (G.) Pfr.

Oleacina o. straminea Desh.

Uro. cienfuegosensis Pils.

The following are the species we collected at Ceiba Mocha, El Palenque and El Pan de Matanzas as determined by Torre. Mocha is 10 miles W. of Matanzas and the Palenque and Pan are 6 miles N. of Mocha.

Megalomestoma apertum	Poey	Mocha, Palen.
Chon. pictum		"
" "	v. major.	"
"	dentatum Say	" "
"	irradians Shuttl.	"
Ct. rugulosum	Pfr.	" "
" "	v. nodulatum Poey	" "
Helicina submarginata	Gray	" "
"	adspersa Pfr.	" "
"	nitida Pfr.	" "
"	conica Pfr.	" "
Alcadia hispida	Pfr.	" "
"	minima Orb.	" "
Eutrochatella sloanei	Shuttl.	" "
"	rupestris	El Pan "
Helix auricoma	Fer.	" "
"	bonplandi Lam.	" "
"	cubensis Pfr.	" "

<i>Helix stigmatica</i> Pfr.	Mocha,	Palenque
" <i>debilis</i> Pfr.	"	"
" <i>multistriata</i> Desh.	"	"
" <i>vortex</i> Pfr.	"	"
<i>Liguus fasciatus</i> Mull.	"	"
<i>Macroceramus palenquensis</i> Gund.		"
<i>Urocoptis seaeva</i> Gundl.	"	"
" <i>fortis</i> "	"	
" <i>modesta</i> Poey		"
" <i>gracillima</i> Poey	"	
" <i>fumosa</i>	El Pan	"
" <i>rugeli</i> Shuttl.?	"	"
<i>Glandina oleacea</i> Fer.	Mocha	"
" <i>solidula</i> Pfr.	"	"
" <i>subulata</i> Pfr.	"	"

We failed to get on the Palenque Chon. presasiana, which much resembles Ch. irradians, except in sculpture, but this sp. only occurs on the north side of the mountain, which Torre and I failed to reach after a long and very tiresome ride horseback.

The Pan and Palenque are two mountains of about 1000 feet of much weathered coral limestone and densely grown over in jungle.

The fine Urocop. gracillima occurs on an old stone fence near the station of Mocha (W. 1/8 mile and N. side of track).

Reported from Guajaibon and Azucar (Crosse L) Guahaibon

G. oleacea

G. ottonis

G. sicilis

G. incisa

Strep. cubaniana

H. sublussulcata

H. parraiana

H. guanensis

H. rangeliana

H. sagraiana

H. raripila (Thysen.)

Macrocer. latus

" *maculatus*

" *elegans*

" *paivanus*

Urocop. torquata

" *irrorata*

" *crenulata*

" *vineta*

" *arcustriata*

" *soluta*

" *presasiana*

Guajaibon

Azucar

Urocop. volubilis

" brunneus

" blainiana

Stenog. gundlachi

Megaeomas. procer

" mani

Choan. majusculum

" pretrei

" blaini

Chondro. latilobre

" egregium

" canaliculata

" assimile

" shuttleworthi

" sericatum

" excisum

Eutro. regina

" subunguiculata

Helicina sagrosiana

" jucunda

" elongata

" rotunda

" remota

" wrighti

Guajaibon

Azucar

Helicina nodae" *fuscula*" *rubromarginata**Alcadia minima*

The above 50 sp. are specially reported from these two localities by Crosse.

Loma de Tapaste

U. planospira or (?) *arangiana* (?)*Cistula jimeno**Chon. pictum*

San Jose de las Lajas

U. humboldiana or *oveideana*(= var. *peraffinis* Pils.)

At Coca near Guines.

U. humboldtiana--strangulata

U. planospira

U. gracillima

Eutrochatella rupestis and *sloaniana*

Chon. pfeifferianum

Helix cubensis *pencillata*

Camoa on water *U. philippiana* *U. aculeus*

Ganuga *Chon. pfeifferiana* (small var.)

Isle of Pines species

Megal. procer + vars.	Cepolis pityonesica
Chon. dissolutum (like pictum)	Thanpha boothiana
" semicanum (S. part of Isl.)	Cepolis comus
Ct. denegatum)	Pleuro. auricoma
) prob. iden.	
" rugulosum)	Liguus fasciatus
Tudora pupoides (Caballos)	Ancylus radiatulus
" moreletiana (Casas)	Planorbis lucidus
Eutrocha. constellata (Casas)	Limnea cubensis
" stellata (Caballos)	Hydrobia
" caliosa Poey	Polygyra paludosa
" luteoapicata (both mts.)	Ampullaria.
Helicina scopulorum (like sloani)	
" elongata	
" adspersa (both mts.)	
Uro. pruinosa (both mts.)	
Pineria terebra	
" beathiana	
Oleacina follicularis	
" oleacea straminea	
" solidula	
" subulata	
Sten. stricta	
Glandinella poeyiana	
Cerion pineria Dall	
Proserpina globulosa	

Isle of Pines Notes

SKETCH

(Key to map)

Eu. constellata 1, 2, 3

Eu. stellata 6, 12

Pineria beathiana 14, 15

" *terebra* 15 (only)

Chon. dissolutum 19

Tudora pupoides 6, 7, 8, 9, 10, 12

Megal. procer 11, and 17 are especially good.

Fresh-water things and *Polygyra* in old corduroy road, 17.

Ampullaria tores 16, just back of beach

Cerion pineria probably on S. coast and at Cabo Fransica in west; also *Chon. semicanum*.

Up river from Nueva Gerona about 5 miles are said to be rapids, stones, falls, etc., probably good for f. w.

Eu. constellata in dry weather live in deep crevices of rock and not easily seen. Live in colonies. Best loc. is no. 1 on map.

Eu. stellata same, but less abundant, on Caballos and that system only. Not on Casas.

In conglomerate on Colombo Mt. *Eu. constellata* was observed!

To be visited from Los Indios the Canada Mts. and San Jose. Also Western Cape (Frances) for *Cerion* and Morelet's *Chon. semicanum* (probably) Daguilla Mt. near Santa Fé is ancient rock and presumably poor collecting. None of these locs. have been explored.

Torre visited Canada Mts. in 1913 and reports nothing there. Morelet's *Ch. semicanum* is a spurious species.

Notes on live animals Isle of Pines

Tudora pupoides

Foot very short. Tentacles all white. Animal crawls side-wise as to longitude of shell and progresses by lifting shell over every foot length of progress

Sketch

Chon. dissolutum

White tentacles, foot short, drags shell just in opposite way from last.

Eut. scopulorum

Has the long vibrating tentacles like Eu. constellaris.

(See paper in Carnegie of Pittsb. Isle of Pines by J.B.H.)

Eu. luteoapicina and *calliosa* not in Smithsonian.

Helicina mestrei Ar. from Mogote del Cerro de Cabras has long, quickly moving tentacles, the eye being at outer base. The mouth is projectile and slit longitudinally, thus giving two lips, a right and left. When feeding, these lips open and close in a very peculiar motion, while crawling the black slender tentacles are kept in rapid motion, whipping the air.

Notes on Sumidero and Luis Lazo trip.

Left Havana Sunday 7 a.m. (April 17, 1909) for Pinar del Rio. Hotel Ricardo at noon and coach (at \$10 per diem) for Sumidero. The first range of mountains are met at Bebedero, a locality given in error by Arango, the actual place of his last trip being just over the range (ancient rock) at a few mogotes called Magotes del Cerro. We stopped there for a few minutes only, reserving same for return journey. The ancient range crossed we see the Sierra de los Organos beyond and descend into the Valley of Isabel Maria; thence to Cabezas and Sumidero, reaching the latter place about 6:30. This road is the new carretera being built from Pinar del Rio to Guave (about 40 miles); Sumidero being about one-half way. Stopped at house of pharmacist. Collected next day at Sumidero and Risoidiero. Following day we drove to Luis Lazo and San Carlos, next back to Pinar, stopping at the Mogotes del Cerro.

At Sumidero points collected marked in numbers.

4 and 5 Simpson only.

Chon. incrassatum -- Helicina jugulata

Eutro. subui

Helicina sag. (percrassa, Torre) MS.

Luis Lazo and San Carlos Valley

Drawing

Chon. crassum (Torre MS.) at 2.

No Licina percrassum found.

I believe will be at 50 (about 2000').

Mogotes del Cerro de Cabras

Choan. tryoni.

Chon. hamlini and var.

Cyl. hidalgoi

"

Hel. nestrei

" cisnerosi

Jean. wrighti (possibly)

These mogotes are limestone islands in the range of
ancient rock.

Isabel Maria, collected

Cyl. violacea

Hel. sagraiana

" jugulata (red mouth)

Chon. incrassatum

Choan. blaini

Alcadia

Hel. montana (?)

San Diego de los Banos trip. November, 1913

Map

Torre's notes on San Diego specimens given him

Mogote de los Indios (no. 2)

Choan. sordidum -- possibly C. blaini. Comp.

Uro. guirensis, but larger and closer striae.

" integra. Requires careful study

" ---- n. sp. (?) Resembles volubilis and saxosa

comp. cristallina difficultuosa

distinct fraterna

Micro. elegans, probably

Melaniella gracillima (?)

---Torre wishes large sp.

La Cumbre (and Bosque No. 4)

Chon. foveatum var.

Strep. episcopalis

O. ottonis - comp. sicilis and incisa

Melan. acuticostata Orb.

Uro. irrorata

U. guirensis

Lyobasis angustatus

Alcadia minima

Eut. regina

Megal. mani.